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by

Katherine P. Rearden

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**PRIMARY AND SECONDARY TIES AS THEY RELATE TO FORMAL
SUPPORT NEED AND UTILIZATION**

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Katherine P. Rearden

A dissertation submitted in partial fulfillment
of the requirements for the degree

Doctor of Philosophy

(Social Welfare)

at the

UNIVERSITY OF WISCONSIN - MADISON

1996

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Dedication

I dedicate this dissertation to my parents, Beatrice May and Anthony Michael Palmere, for their sterling example, to my brother and sister, Anthony and Valerie, for their confidence in my eminent success, to my dear Scottish Terrier Spencer, whose affection and companionship comforted me throughout this process, and most of all, to my beloved spouse Tom, whose bounteous support and communion empowered me.

PRIMARY AND SECONDARY TIES AS THEY RELATE TO FORMAL SUPPORT NEED AND UTILIZATION

Katherine P. Rearden

Under the supervision of Assistant Professor Jane Holschuh

At the University of Wisconsin-Madison

This study seeks to advance insight into the mechanics of the social support process by examining the relationships between informal spousal and community ties and one's need for and use of formal social support services. This secondary hierarchical regression data analysis employs cross-sectional data that were gathered by the United States Air Force as a stratified, random probability sample of 100,000 active duty military members of which roughly 51% responded to an anonymous mail survey. This study examines the relationship between informal and formal social support in order to develop explanatory models generating causal hypotheses for future investigation. A major gap in the area of informal and formal social support is addressed in that this population is healthy compared to the elderly, physically and mentally ill populations typically examined in the study of informal and formal social support linkages. Regardless of the degree of informal tie, primary (marital) or secondary (community volunteerism) informal support was positively related to both the need for, and the use of, formal support services consistent with complementary theory. Findings suggest that marital status and community volunteerism may not function as sources of informal support in the military population. Rather, marital status and community volunteerism may actually function as sources of formal support in the military culture representing a marked departure from current conceptualizations in social support

linkage research. Also positively related to the need for formal support was the number of hours one volunteered in one's community. Conversely, satisfaction with either marital or community informal support predicted less need for formal support. The physical availability of one's marital partner was not related to the need for, nor the use of formal support in an overseas subsample.

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CHAPTER 1

INTRODUCTION TO THE PROBLEM

Background

Contemporary stress literature abounds with paradigms to account for ways in which psychosocial sources of stress, commonly termed stressors, relate to and are predictive of a variety of health outcomes (Wheaton, 1994; Aneshensel, 1992; Thoits, 1995). A central explanatory postulate of this literature addresses varying mental health outcomes by identifying mediating or moderating influences of other factors for consideration (Avison & Gotlib, 1994). Among these potential factors, social support accessed through one's social network emerges as a primary factor accounting for differing outcomes in stress research (Billings and Moos, 1981; Thoits, 1982; House, Umberson & Landis, 1988; Pearlin, 1985, 1989; and Sarason, Sarason & Pierce, 1990).

Some definitional and conceptual points of agreement resulted from much debate over vague and inclusive terms that exemplified social support research of the 1980's (Tardy, 1985; Pearlin, 1989; House, Umberson & Landis, 1988). There is general acceptance that social support is a coping resource (Thoits, 1995) that individuals access to minimize deleterious effects of stress (Avison & Gotlib, 1994). Social support is effective to the extent that it conveys messages of social connectedness that offer love, affection, affirmation (Hobfoll & Stephen, 1990), instrumental aid, information and guidance (House, 1981; Antonucci, 1985; Tardy, 1985). Access to one's "bank" or "fund" of support resources (Antonucci & Jackson, 1990; Thoits, 1995) is made through one's social network. This network consists of primary informal groups such as family, friends, neighbors and coworkers

(Fischer, 1982) and formal groups that constitute professional and organizational sources of support (Litwak, 1985).

Although one typically turns to an intimate confidant in times of trouble, some stressors simultaneously represent a loss of informal network resources, either perceived or actual, as in the case of a chronic illness or death of a family member. Such stressors not only drain but can terminate support provision as in the case of divorce from or death of a spouse (Thoits, 1995). However, a commonly held belief is that life experiences of this nature activate rather than diminish help-seeking behavior (Eckenrode & Wethington, 1990). Instances that deplete support resources from intimate and family relationships likely promote the use of alternative network resources. Affiliations with voluntary community organizations may provide secondary informal support in such circumstances or when one does not have access to an intimate relationship through distance or circumstance. Additionally, one may seek assistance from a formal body of organized and professional care providers.

While much progress occurred in social support research over the past two decades, a coherent unitary theoretical framework of the social support process eludes the research community (Lin and Ensel, 1989) in part because mechanics of the process remain undetermined (Pearlin, 1989). Considerable theoretical discussion exists about the role social support plays in stress reduction regarding physical and psychological illness (Berkman, 1985; Pearlin, 1985; Belle, 1987) but precise mechanisms remain speculative at present (Thoits, 1995).

How one copes with stressful events and the resources one utilizes to accomplish this is of interest to human-service policy makers currently pressed with resource scarcity resulting from decreased governmental funding in social services provision. Historical rhetoric identifying scientific and technologically based interventions as better equipped to solve human problems (Weber, 1947) perpetuated formal policy response to physical and mental health needs (Litwak, 1985). Development of institutions to provide both inpatient and outpatient health and social care flourished over the past thirty years, particularly for the elderly (US. General Accounting Office, 1988) and the mentally ill (Mechanic, 1980; National Institute of Health, 1987). Current concern over shrinking fiscal health and social appropriations now centers research upon informal as well as formal provisions of social support.

The prominent debate in the social support provision literature, and the focus of this study, addresses formal and informal support provision and how these sources of support interact. Specifically, the question heatedly debated in the literature is whether the provision of formal support services works in complement with or substitutes for informal care (Litwak, & Szelenyi, 1969; Cantor, 1979; Abrams, 1981; Pinker, 1985; Hoch & Hemmens, 1987; Logan & Spitze, 1994). This debate occurs, in part, over concerns that public policy perpetuates formal services as a substitution for traditional forms of informal care. Concerns of policy makers center on the possibility that provision of formal services may undermine the provision of informal care of family, friends and neighbors that presently represents the majority of supportive interactions (Eustis, Greenberg, & Patten, 1984). If true, perpetuating formal care without attention to potential negative ramifications would compromise the

quality of life of the recipients of formal service provision in two primary ways: (1) by eroding informal care delivery from family, friends, and neighbors and, (2) by promoting vulnerability to the loss or diminution of future governmental services appropriations.

Diminishing governmental funding in the social services arena prompts recommendations to weave formal and informal service delivery. There are those convinced that for reasons of structure, formal and informal care must remain separate entities (Pinker, 1985; Hoch & Hemmens, 1987; Abrams, 1981) while others are more optimistic about an alliance plan for service delivery (Wireman, 1984; Miller, 1985; Gottlieb, 1985; Litwin & Auslander, 1988). Resolution of this debate requires a richer understanding of how formal and informal networks of support behave when fostering one's access to social resources and providing support (Auslander & Litwin, 1988).

Despite rising concerns over increasing costs of institutional care for the elderly, the bulk of the senior population resides within the community where most social support is provided by family, friends and neighbors (Shanas, 1979; Shanas and Maddox, 1985; Litwin & Auslander, 1988; Hanley, Wiener & Harris, 1991). Studies document family members are the first source accessed for emotional and social support in general as well as in times of crisis (Shanas, 1979; Kessler & Essex, 1982; Krause, 1987; Shanas & Maddox, 1985; Krause, 1987; Litwin & Auslander, 1988). Informal networks are most likely a conduit to formal social services (McKinlay, 1973; Salloway & Dillon, 1973; Murdock & Schwartz, 1978; Antonucci & Depner, 1982) especially for elderly in need of institutional care (Litwin & Auslander, 1988) or when medical needs (Pescoslido, 1992) or psychiatric needs (Horwitz,

1987) exceed the resource availability of informal members. Little is known, however, about this hypothesis with regard to a younger, physically healthy population.

Description of the Target Population

The population for this study is an important conceptual facet of my research design due to the nature of the military environment. The military community offers a unique opportunity to examine social support in a natural laboratory setting complete with certain built in controls unavailable in other populations. Screened for education, health and behavioral criteria, this population permits examination of theories of social support research among a healthier population compared to other populations typically studied. Despite the challenges of a military lifestyle, many enlistees remain in the armed forces for more than one tour of duty. The majority of active duty members complete their tour of duty without significant physical or mental health consequence, evidence that most manage a stressful lifestyle successfully.

The population examined in this study is all United States Air Force (USAF) active duty personnel. It is important to note that members of this population unlike reserve military members, conduct their lives within the military community on a daily basis. Active duty personnel differ from reservists in that reservists: (1) are limited in the amount of annual military duty served, (2) typically live in the greater community when not on duty, and, (3) have primary employment more often situated in the civilian sector. The United States Army (USA) conducts or oversees the bulk of military research usually employing samples of soldiers. Since many aspects of military life cut across service branches, Army as well as Navy conducted military research is applicable to this discussion.

Aspects Inherent in Military Life

Each branch of military service conducts a screening process to ensure personnel compliance with certain health, educational and behavioral standards (Rothberg, Bartone, Holloway & Marlowe, 1990). Consequently, the active duty military population differs from the general population in a variety of ways. Perhaps the most striking differences are health related. All active duty members must be physically and mentally "fit for duty" to enter into the military. Each branch of service defines fitness standards consistent with the Department of Defense guidelines and contingent upon the nature of the work performed by that branch of service (US. Dept. of Defense, Dept. of the Air Force, 1976). Thought to be healthier compared to their civilian counterparts, military members self select to become trained for specific occupations and are provided food, uniforms, shelter, participate in ongoing conditioning fitness regiments and are subject to mandatory comprehensive health care participation (Rothberg & Jones, 1987). Fitness status is a factor in the success of any military action, consequently, it is subject to scrutiny within the system.

The military institution routinely imposes a unique set of work demands that are at best troublesome and often carry great personal risk. Viewed as the norm within the military culture, a host of stressors of military life would be unacceptable in most civilian sector employment arenas. Frequent geographic relocation, abrupt deployment directives, overseas transfers, long working hours, and ongoing risks of injury or death are normative (Segal, 1989). Additional evidence of stressors endemic to military life include participation in diverse military exercises, ongoing career specific education and training requirements, rigorous continuous physical training, and prevailing fitness standards with periodic

performance reviews. Perhaps most stressful for the active duty person and family members is the cyclic experience of geographic relocation, an aspect of military life that merits discussion.

Geographic Relocation as a Source of Military Stress

Studies of relocation patterns suggest that as many as 20% of Americans relocate in any given year (Sinetar, 1986; Hazler & Nass, 1988) and at least half of these moves are work related (Employee Transfer Corporation, 1982). While some people may actually thrive on challenges associated with geographic relocation (Stokols & Schumaker, 1982), others may incur stress related disease (Gherman, 1981) associated with moving. Indeed, relocation specialists report that at a minimum, the majority of their clients suffer from fears of uncertainty and a sense of social isolation (Brooks, 1983) in conjunction with relocating. Studies conducted of occupations that require high rates of work related relocation identify a profile of stress based symptoms termed "mobility syndrome" (Marshall & Cooper, 1979). Some symptoms included in this profile are depression, a significant rate of alcoholism, feelings of social estrangement, little community investment, and strong spousal dependency (Marshall & Cooper, 1979).

Although one typically turns to an intimate confidant in times of trouble, some stressors simultaneously represent a loss of informal network resources, either perceived or actual, as in the case of geographic relocation. Not only does this life transition drain but it can sometimes terminate support provision. A common array of stressors among those who geographically relocate is noteworthy. Permeated by a theme of loss, moving always entails a change in residence that may mean loss of the family home. Geographical relocation may

mean separation from extended family and friends or interruptions in educational achievement or career development for one or more of the primary family members. When both spouses work, income from a spouse terminates until the spouse resumes employment at the new location. Often both spouses cannot relocate at the same time. When this happens additional burden may result for the spouse left behind who frequently assumes tasks associated with roles vacated by the transferring spouse (Cooper, 1981). Also noteworthy is the loss of social support from one's marital partner when one spouse must relocate without the other. In the case of military members such family separations are common place occurring as often as every two and a half years with a duration as long as a year to eighteen consecutive months.

Military members incur all of these stressors but at a rate four times that of their civilian counterparts (OASD, 1993). The USAF family typically moves every two and a half year (Bowen & Pittman, 1993) and rarely recovers financially the average \$2400 unreimbursed expense of each move (OASD, 1993). Compounding the stressful impact of geographic relocation are language and cultural barriers inherent in overseas tours of duty. Military members who are reassigned to a new duty site and "not command sponsored" (family is not supported by the employer to relocate with the military member), but choose to relocate their family with them, must endure the additional hardship of restricted access to military institutional support available to command sponsored members. Therefore, nonsponsored members must finance the venture entirely alone, typically in countries where the exchange rate is too expensive for junior enlisted pay grades. That is why it is not uncommon for families of members assigned to duty overseas not to relocate with the military member.

Problem Statement

Gaining greater understanding of how one's informal social support resources interface with formal support services to promote successful management of life challenges built into a military lifestyle may promote insight into the mechanics of the general social support process. Additional information that clarifies the linkages between informal support from family, friends and the community and formal professional support services is paramount to policy makers and planners of support services rendered to those in need. The findings of this study have timely implications for human service policy makers presently confronted with shrinking fiscal appropriations for formal service delivery. This study also fills two gaps in our present knowledge regarding the interface between informal and formal social support. They are as follows:

(1) There is a need for empirical description of key informal support resources among younger, healthier people and how these informal relationships relate to one's need for formal social support. The current knowledge base of need for formal support services builds upon studies conducted with predominantly elderly and physically or mentally ill populations. Consequently, limited information exists concerning healthier people.

This dissertation studies key primary and secondary informal relationships to gain insight into one's need for professional support services. Key informal support relationships include one's marital relationship (primary) and community involvement through volunteerism (secondary). Systematic examinations of these informal relationships occur with regard to a wide array of potential social support needs one may incur in an environment given to an increased potential for risk. Specific dimensions of informal relationships examined include

the presence and availability of a marital partner or community tie, satisfaction with the relationship and level of involvement in one's community.

(2) As in the case of need for social support, application of prominent informal and formal social support linkage theory with regard to a younger, healthier population is sparse. Formal social support utilization studies have typically employed elderly or ill populations. This dissertation applies informal and formal support linkage theory to a healthier population to aid in clarification of whether informal and formal social supports operate in a complementary fashion.

Findings of previous research supporting a counter argument termed "substitution theory," that is, providing formal support services undermine informal support provided by family and friends, may be attributable, in part, to the population studied. To address the limitations of existing research, this study applies complementary theory, discussed in greater detail in the gerontological literature and social policy literature (Cantor, 1979; Brody, 1981; Stoller & Earl, 1983; Chatters, Taylor, & Jackson, 1986) to a younger, healthier population in an attempt to replicate findings reported in the literature on elderly and ill populations and to generate causal hypotheses for future research.

Goal and Aims of the Dissertation

The general goal of this study is to address one aspect of the support process by advancing current knowledge of the relationship between primary and secondary informal and formal support. Pursuant to this goal the following aims of this research are:

- #1 -- to explore whether demographic characteristics relate to primary (spousal) and secondary (community) informal support and to formal professional

support outcomes for inclusion in explanatory models as control variables.

Demographic variables include age, education, gender, race, rank and number of years of military service.

#2 --to examine the relationship between informal primary (spousal) and secondary (community) support and the need for formal professional support services.

#3 -- to examine the relationship between primary (spousal) and secondary (community) informal support and the use of formal professional support services.

CHAPTER 2

LITERATURE REVIEW AND CORRESPONDING RESEARCH QUESTIONS

Stress and the Social Support Process

Embraced by scholars and by lay persons alike, stress is a familiar concept occurring in everyday language but often with idiosyncratic signification. Like most words in the English language the meaning of stress differs across disciplines of study and periods of history. So too, stress with its first recorded use in the 14th century, commonly referring to privation, suffering, affliction or destitution (Lazarus, 1993), evidences changing utility in research arenas.

Selye (1956, 1976) building upon earlier biobehavioral works of Cannon (1929, 1932) and extracting elements from the physical sciences model of stress as it is applied in

metallurgy (Smith & Ellsworth, 1987), formally assembled what has come to be known as the "Life Stress Paradigm" (Selye 1956, 1976; Cannon 1932; Smith & Ellsworth, 1987). Selye's (1956) classic work formulated as a biological model, operationalized stress in terms of aversive physiological stimuli (such as noise or shock.) that placed environmental demands on laboratory animals. Observations of animal outcomes lead to expansions of the "Life Stress Paradigm" to include the "General Adaptation Syndrome," which proposed that upon environmental change, one adapts to the environment (Selye 1976, 1982). Stress was categorized by Lazarus (1966, 1981) as (1) "harm," defined as psychological injury, (2) "threat," a determination of impending danger, and (3) "challenge," resulting from a judgment that demands are within ones manageability (as cited by Lazarus, 1993). Early efforts to measure life stress gave rise to the term stressor, the causal agent, believed to produce demands for adaptation that was not without risk. Life event inventories fashioned after Holmes and Rahe's (1967) Social Readjustment Rating Scale became the primary measurement method typically measuring change relative to stressor based upon frequency, severity and duration (Holmes & Rahe, 1967; Lester, Nebel & Baum, 1994).

As the Life Stress Paradigm gained acceptance so too did usage of life event inventories partly due to administrative ease of application and their intuitive, straight forward approach (McLean & Link, 1994). Support for the hypothesis that changes in life link in some fashion to distress and pathology (Dohrenwend & Dohrenwend, 1981) mounted through the 1970s, directing attention toward negative life events (Ensel & Lin, 1991; Anshensel, Rutter & Lachenbruch, 1991). Transition from general change events to the narrowed view of detrimental change forged a common consensus of scientist and layperson

alike, that life change leads to negative outcomes (Holahan & Moos, 1994). Additionally, this transition also accounts, in part, for the predominant view of the time, that stress research was best conducted from a medical model fueling sociomedical perspectives.

Theoretical and empirical evidence mounted for the acceptance of the primary proposition of stress research; that is, psychosocial and physiological stressors influence psychosocial and physical outcomes of well being (Brown & Harris, 1989; Aneshensel, 1992; Lazarus, 1993; Monroe & McQuaid, 1994). Conceptualizations advanced from stimulus response models to more complex frameworks to include intervening variables that could account for outcome variability. Outcome measures shifted from illness focus to more adaptive and resilient models to uncover adaptive strengths or resistant characteristics that protected individuals from stressors or somehow better equipped one to cope with stressful experiences.

Paralleling the advancement of psychological inquiries exploring the stress-distress relationship, findings that pointed the way toward socioenvironmental factors were gaining momentum. Social integration with respect to the diffusion of discord and disease begins with classic works of Emile Durkheim who offered his Theory of Anomie based upon suicide investigations he conducted in 1897 (Durkheim, 1951). He theorized that naturally occurring social forces drove people toward suicide but that social integration provided structure to prevent this occurrence in most (Durkheim, 1951).

Cassel's (1976) discussion of disease potential resulting from isolation from one's own species, and Cobb's (1976) identification that social support results in feelings of belonging essential to disease prevention laid ground work for Berkman & Syme's (1979) prospective

investigation of personal relationships and mortality. Berkman & Syme (1979) found evidence suggesting that socially isolated people were at greater risk of mortality from all causes during the nine year follow-up time frame compared to those who had more social ties. Based upon interviews conducted in 1965 mortality nine years later was predicted by degree of social integration measured by marital status, contact with friends, group affiliation and church attendance.

Despite the consistent finding of a significant relationship between life events and distress or disorder, the strength of the relationships was modest at best with empirical evidence reflecting associations ranging from .1 to .3 (Rabkin & Stuening, 1976; Thoits, 1983). Original explanation for the weak relationship focused on measurement error (Holahan & Moos, 1994) and eventually lead to investigation of intervening variables that either mediated the relationship between stressors and outcomes or moderated the process with significant interactions (Aneshensel, 1992).

A second proposition commonly held in stress research is that certain intervening factors influence one's experience with stressful situations and the ensuing manifestation of symptomatology and/or maladaptivity (Avison & Gotlib, 1994). This proposition evolves from work to address response variability to similar stressors and thus includes a variety of variables pertaining to the study of stress. Such intervening variables mediate outcomes of stressors upon well being or by modifying, sometimes referred to as buffering, effects of stressors on well being. Social resources are essential to survival and well-being (Ensel & Lin, 1991) and refer to a dynamic group of varied social elements with potential to connect and sustain a person in the face of all manner of demands. Contemporary literature casts

three broad categories of social resources described here briefly which include social integration, social networks and social support.

Social integration refers to the depth and breath of one's connectedness to others in the environment. This term is synonymous with degree of embeddedness (House, 1987; Barrera, 1986). Measures of social integration yield positive direct associations with mental and physical well being (Thoits, 1995). Specifically noteworthy is that the presence of an intimate confiding relationship is a significant predictor of lower levels of mental and physical illness (Cohen & Wills, 1985).

Social networks embrace one's place in a social system of many. These social resources include structural characteristics such as size, density, accessibility, homogeneity, among many others and how they relate to function in the acquisition of social supports and maintenance of one's connectedness. Then examination of these constructs occurs in relation to overall well-being (Thoits, 1982; House, 1987; Morgan, 1990).

Social support believed to function as a buffer in crisis periods (Thoits, 1982) is comprised of four types: appraisal (feed back); emotional (trust, love, validation, belonging); informational (advice), or instrumental (tangible aids) forms of support (Barrera, 1983, 1986; Tardy, 1985). Contrary to intuitive sense, perceived rather than received support buffers stressful events (Wethington & Kessler, 1986). Across the life course, in differing amounts and types, contingent upon type(s) of stressors, one draws against a resource bank for needed support (Thoits, 1995). Consistent with attachment theory (Bowlby, 1969, 1973) intimate bonding promotes healthy psychological development. Meeting a variety of human needs,

social support fosters recovery from illness and maintains ongoing health care (Cohen & Wills, 1985; House, Landis and Umberson, 1988).

Informal and Formal Sources of Social Support

Described in the literature as the informal sector, social network members are different from formal network resources. Informal network members include immediate family, friends, extended kin, and neighbors (Chappell & Havens, 1985; Litwak, 1985), "natural helpers" (Collins & Pancoast, 1976), nonprofessional self help or mutual aid groups (Froland, 1980), and coworkers (Fischer, 1982). Informal network members provide support within the unique context of a relationship based upon the nature of need or preferences of the informal provider, (Froland, 1980) contingent upon principles of reciprocity (Antonucci & Jackson, 1990) that are governed by the rights and responsibilities prescribed within the larger group, community or culture (Froland, 1980). Informal support encompasses expressive support that promotes feelings of being valued or loved and typically provided based upon attachment of an unstructured nature (Kramer, 1979; Litwak, 1985).

Potential formal network resources include governmentally dictated or sponsored services, often administered by state authority or federally funded nonprofit agencies (Froland, 1980), the private sector and voluntary organizations (Litwak, 1985). Professional services found within the formal sector are provided contingent upon an assessment of one's need or eligibility, within established guidelines for service delivery, where type and quality of care are prescribed regardless of personal characteristics of provider or recipient, and evaluated by objective criteria (Froland, 1980). Support typically comprises instrumental

tasks promoting rehabilitation or replacement of deteriorating functioning, (Chappell & Guse, 1989) structured along organizational goals (Litwak, 1985) and privately or publicly funded.

An area of some disagreement is the categorization of voluntary participation in groups that tend to be less intimate sources of informal support and established via voluntary affiliations with professional or collegial associations and neighborhood or community organizations (Fischer, 1982; Litwak, 1985; Auslander & Litwin, 1988). Voluntary organizations that provide services to the community constitute a formal network resource to one who seeks services directly from the organization. However, those who volunteer to provide such services derive benefit and opportunity for secondary forms of informal support from other volunteers and network contacts made in the conduction of volunteer activities, such as attending meetings or promoting services in the community. Consequently, the context of the relationship with such organizations will determine whether relationships built with voluntary service organizations constitute formal or informal status.

Social Integration Theory and the Need of Formal Social Support

Empirical evidence demonstrates that social integration is "directly and positively related to mental health" outcomes (House, Umberson and Landis, 1988; Thoits, 1995, p.64). Social integration is defined as the 'participation and involvement of a person in his or her social life in the community and in society'. It also examines the "goods and values of the community and society, as well as access to resources and support systems" (Laireiter & Baumann, 1988, p. 199). One aspect of social integration is one's degree of "embeddedness," a term that refers to one's relationship ties to others in one's social surroundings (Barrera, 1986) including specific "primary" family members (Thoits, 1982),

"secondary" community affiliations (Berkman & Syme, 1979) and professional providers of social support (Fischer, 1982). One aspect of help-seeking often overlooked in research is the embedded nature of each person within their respective social relationships and the influence embedded social support exerts upon help-seeking (Thoits, 1982; Eraker, Kirscht, & Becker, 1984).

People who invest in close personal relationships, or who engage in social intercourse in community volunteerism, or both, are likely to differ from their counterparts with respect to the need for professional support services and help-seeking behavior. Perhaps those that enjoy greater degrees of social embeddedness may not need formal support services compared to those more socially isolated (Fox, 1984; Leaf, Livingston, Tischler, Weissman, Holzer & Myers, 1985; Horwitz, 1987). The giving of help is an activity one performs to address the needs of another (Harlan, 1982; Stoller & Earl, 1983) and used frequently in conjunction with informal sources of support. Dimensions such as social integration and composition of one's network (who is giving the help) strongly influence the type and amount of help or support one receives (Barrera, 1986; Wellman & Wortley, 1990). Two informal sources of support explored in this study are primary spousal and secondary community support.

Primary Informal Support -- Spousal Ties:

The mere presence of a spouse embodies a potential resource that is unavailable to those not invested in a similarly intimate relationship (Eaton, 1978). Gove, Hughes and Style (1983) found that the number one predictor of mental health and physical well-being was marital status primarily due to social support that exchanges between partners (Kessler & Essex, 1982). This finding was statistically more significant for males than for females and

so, is particularly relevant to the predominantly male population proposed for this study. Infact, the strongest, most parsimonious measure of social support is the presence of an intimate and confiding relationship (Cohen & Wills, 1985; Kessler & McLeod, 1985; House et al., 1988) construed to be a primary relationship.

Married partners also have increased potential accessibility to network resources directly and indirectly though one's spousal network unavailable to unmarried people. Indeed, 77% of studies reviewed of research conducted prior to 1985 that examined this relationship, replicate the finding that presence of an intimate relationship significantly decreases the impact of stressful life events on psychological outcomes (Cohen & Wills, 1985; for exception since 1985 see Ensel & Lin, 1991). One possible explanation for exception (Ensel & Lin, 1991) to this pattern may lie in how supportive a relationship is. I will address this topic thoroughly in a separate section below. Another consideration is whether or not one has access to one's spouse, an important consideration for a population as mobile as active duty military members.

Social integration theory supports the expectations that military members with spousal support are less likely to need formal support services compared to unmarried military members because presence of a marital relationship will somehow diminish the detrimental aspects of a stressful military lifestyle. One specific stressor common to all military personnel is geographic relocation, a topic more thoroughly discussed previously in this review. Social integration theory suggests that married military members accompanied by their spouses when geographically relocated are less likely to need formal support services compared to those unaccompanied by their spouses due to protective benefits of marital

support unavailable to unaccompanied members. If it is true that the marital relationship is typically one's chief primary source of social support, then decreased availability of one's spouse would likely increase one's need for formal social support services, according to social integration theory.

Secondary Informal Support -- Community Ties:

Participation in community service associations is another avenue explored to establish degree of embeddedness (Berkman & Syme, 1979, Lin, Simeone, Ensel, & Kuo, 1979; Fischer, 1982) and is viewed here as a potential secondary social support resource and dimension of social integration (Sandler & Barrera, 1984, Laireiter & Baumann, 1992).

Voluntary associations characterized by membership contingent upon free choice was subjected to a variety of interpretations. However, one typology frequently employed is that of Babchuk and Booth (1969) which includes fraternal societies, associations related to work or religion, youth programs and alike.

Researchers examined the degree of participation with regard to numbers of affiliations, duration of attendance and length of commitment (Tomeh, 1973), each of which captures a slightly different aspect of one's embeddedness within the community. Number of affiliations with voluntary associations positively relates to the number of personal ties (Fischer, 1982) and visa versa. Therefore, people "with a greater number of close personal ties participate in more voluntary organizations" (Auslander & Litwin, 1988) providing some insight into degree of embeddedness. Thus social integration theory suggests that military members who volunteer will have less need for formal social support services than those who do not volunteer due to the likelihood that volunteers will possess more secondary informal

sources of support compared to those who do not volunteer. When one is both married and tied to one's community, one may enjoy greater protective benefit from presence of both of these ties. On the basis of social integration theory, one would expect that married military members who also volunteer report less need for formal social support services than married members who do not volunteer.

While studies consistently replicate the finding that presence of an intimate relationship significantly decreases the impact of stressful life events on psychological outcomes (Cohen & Wills, 1985) others have reported findings to the contrary (for exception since 1985 see Ensel & Lin, 1991). One possible explanation for exception (Ensel & Lin, 1991) to this pattern may be how supportive a relationship is. I will now address this prospect and the implications of satisfaction with social support.

Satisfaction with Social Support:

Despite the many conceptualizations of social support found in the support literature, salient categorical distinctions emerge between cognition and behavior differentiating "perceived social support" from "enacted social support" (Barrera, 1981; Gottlieb, 1983; Helter & Swindle, 1983). "Perception of social support" is a cognitive appraisal examined along dimensions of whether social support is available and adequate to cope with stressors incurred (Cohen & Hoberman, 1983; Procidano & Heller, 1983; Barrera, 1986). Social support researchers have argued that subjective measures reflecting perceptions of need and the adequacy or effectiveness of support type received, are more sensitive than objective measures (Barrera, 1981; Dimatteo & Hays, 1981; Sarason, Levine Basham & Sarason, 1983). This argument appears reasonable given the unique nature of situation specific needs

expressed within relationships governed by expectations that elude some of those concerned (Barrera, 1986). A more objective approach that would examine support provided within transactions would not capture perceptions of adequacy nor effectiveness of the provision of support (Barrera, 1986).

Perceptions of support are either a global subjective perception of support or an evaluation, as satisfaction with specific support provided by a particular network member (Laireiter & Baumann, 1992). Laireiter and Baumann (1992) conducted analyses of network members and the roles or functions they play in the provision of support. Their analyses reveal those family members, spouses in particular, and friends who were emotionally close, appear to regulate "emotional needs for support, venting negative feelings and bolstering self-esteem" (p. 52). Having family members, spouses and emotionally close friends highly correlates with perceived support and evaluations of satisfaction with general enacted support (Laireiter & Baumann, 1992).

Perceptions of emotional social support, in particular, are directly associated with and frequently buffer damaging psychological impacts of major life events and chronic strains (Antonucci & Israel, 1986; Wethington & Kessler, 1986; Vaux & Athanassopoulou, 1987; for review of this topic see Thoits, 1995). Researchers who have compared subjective and objective measures in predicting mental health outcomes found no relation between neurotic symptoms and objective measures of availability of support (Henderson, Byrne & Duncun-Jones, 1981). However, when an individual confronts a stressor(s), perceptions of the adequacy of supportive relationships, not simply the availability of such relationships, predicted symptom manifestation (Henderson, Byrne & Duncun-Jones, 1981). Those

typically engaged in dissatisfying social relationships were at greatest risk for symptom manifestation. Consequently, although presence of a spouse may be a strong measure of social support, satisfaction with the marital relationship likely reflects how supportive the marital relationship is. Those satisfied with their marital relationships likely derive more supportive benefit compare to their counterparts, especially during times of increased stress. Therefore, one would expect that those military members invested in a satisfying spousal or community relationship will have less need for mental health services than those whose relationships are not satisfying.

While need for mental health services may predict use of same, not all who need services seek professional help (Link and Dohrenwend, 1980). Some psychiatric disordered people often seek help from general medical practitioners (Goldberg & Huxley, 1980). Community resident surveys suggest that at least 40% of psychiatric disordered patients seek general over psychiatric medical care (Leaf, 1985). If need is identified, however, degree of social embeddedness likely relates to the use of professional support services (Antonucci & Depner, 1982) because social relationships often provide information about professional service availability as well as encouragement to seek help (Chappel, 1987; George, 1987). Consequently, I now continue my discussion of informal and formal support by addressing the prominent debate in service provision literature.

Complementary or Substitution Theory Regarding Use of Formal Support Services

A prominent debate in contemporary social support provision literature addresses formal and informal support provision and how these sources of support interact. Specifically, the question heatedly debated in the literature is whether the provision of formal

support services works in complement with or substitutes for informal care especially from primary ties (Litwak, & Szelenyi, 1969; Cantor, 1979; Abrams, 1981; Pinker, 1985; Hoch & Hemmens, 1987; Logan & Spitze, 1994). This debate focuses on concerns that policy perpetuates formal services as a substitution for traditional forms of informal care. Concerns of policy makers' center on the possibility that provision of formal services may undermine the provision of informal care of family, friends and neighbors that presently represent the majority of supportive interactions (Eustis, Greenberg, & Patten, 1984).

Evidence is mounting in the gerontological support literature for the theory of substitution of formal services for informal care (Greene, 1983) but the evidence is conflicting given certain situations. Elderly studies show that substitution is more likely to occur when one's primary care giver changes or dies or geographically separate (Jette, Tennstedt, & Branch, 1992; Tennstedt, Crawford & McKinlay, 1993). However, the hierarchical-compensatory model appears in the gerontological literature as an accepted framework to examine needs of the elderly especially among those chronically ill (Chatters, Taylor, & Jackson, 1986).

This model proposes an ordered preference in help-seeking behavior identifying the spouse as the primary provider of choice (Cantor, 1979; Shanas, 1979; Stoller & Earl, 1983; Chatters, Taylor & Jackson, 1986). This model is consistent with much of the empirical evidence found at different adult stages of life (Fischer, 1982; Wellman & Worthley, 1990) but does not account adequately for differential findings for certain types of support needed including socioemotional, (Wellman & Wortley, 1990), informational (Granovetter, 1974; Hanlon, 1982; Fischer, 1982) and instrumental aid (Litwak, 1985; Penning, 1980). These

differential findings laid the ground work for a broader conceptual framework that encompasses the hierarchical-compensatory model but goes beyond it. Messeri, Silverstein, & Litwak (1993) suggest that the nature of the task influences help-seeking behavior contingent upon certain qualitative dimensions unique to the person and group from whom one seeks help. Their model is termed the "task specificity model". Both the hierarchical-compensatory model and task specificity model are consistent with complementary theory. Messeri (et al. 1993), discuss seven dimensions that aid in distinguishing between informal and formal sources of support optimal in performing the appropriate task to address an identified need.

Tasks better performed by formal organizations can be discerned along three dimensions including the "type of motivation [of the task provider], division of labor, and level of technical knowledge" (Messeri, et al. 1993, p.124) necessary to adequately address the need. Informal sources of support can be distinguished by dimensions of "proximity, length of commitment, commonality of lifestyle [between the focal person and the task provider]and size" (Messeri, et al. 1993, p.124). Consequently, while informal sources of support may be preferred regardless of the nature of need, the authors posit that one likely turns to formal support providers whenever the task required to address the need is technical in nature, or when informal resource availability is inadequate to meet the need.

Paramount to the distinction between formal and informal groups, according to the task specificity model, is the incentive to provide support. Formal organizations motivate providers via monetary gratuity while informal providers typically provide assistance based upon emotional attachment and a value structure that dictates caring for others. While

division of labor among formal organization providers may enhance efficiency of task provision, emotional distance characteristic of formal support may diminish the quality of care received by the focal person. Yet some needs tasks demand technical knowledge or expertise available only in a formal arena as well as tasks that simply surpass the informal resource capacity of informal providers to address same.

Research consistently identifies the preference for family and significant others over professional services especially the primary support from one's spouse (Kessler & Essex, 1982; Krause, 1987). This perpetuates the belief that informal relationships constitute the bulk of human support capital abating the utility of formal support delivery systems (Jette, Tennstedt, & Branch, 1992). Since emotional support seems to be an important factor in diminishing the impact of negative life events (Wills, 1991) and emotional support is already identified in most people's informal networks, it is reasonable to understand why one would turn first to informal support (Kessler & Essex, 1982; Krause, 1987). According to the medical model, only formal intervention possesses the technical knowledge needed to address mental health symptoms adequately, although a spouse may be the provider of preference for general emotional support. While one turns first to informal members to provide support, (Wills, 1992) informal members often facilitate or bridge those in need to formal service provision, consistent with complementary theory. It also seems reasonable that formal services are a last resort (Gourash, 1978) when self-help and informal supports fail to adequately address need. Consequently, complementary theory may explain the mechanics of informal and formal support more thoroughly. Although my data is insufficient to test substitution theory, it is sufficient to examine aspects of complementary theory.

Given this notion of complementary theory that informal network members act as a conduit to formal support services, one would expect that married military members will likely utilize professional social support services more compared to unmarried counterparts. Similarly, those who volunteer are more likely to use professional social support services compared to those who do not volunteer as these secondary forms of informal support may serve in a similar conduit capacity.

In summary, while some studies document that primary and secondary informal network members facilitate formal service usage consistent with complementary theory (McKinlay, 1973; Salloway & Dillon, 1973; Murdock & Schwarly, 1978) others offer evidence to the contrary. Some researchers report that the more informal support one has, the less likely one will use formal support offering evidence consistent with the substitution theory (Branch & Jette, 1982; McAuley & Prohasha, 1982; McKinlay & Tennstedt, 1986; Ward, Sheran & LaGory, 1984). Hopefully, this study will advance knowledge in this regard.

Demographic Distinctions Regarding Informal and Formal Support

Social structures that stratify society, constrain the availability and utilization of social support resources. Such demographic factors that influence formal and informal care provision are quite substantial. Limited resource access based upon age, gender, ethnicity and socioeconomic status appear documented throughout the literature (Kahana & Kiyah, 1980; Burke & Goudy, 1981; Gore & Mangione, 1983; Pearlin, 1989; Turner, 1994). Prior research suggests that the impoverished, the working class, the unmarried (Ulbrich, 1989; Thoits, 1982), the young and the very old (Thoits, 1987; McLeod & Kessler, 1990) are at increased risk for need of social support.

Demographics and Informal Support:

Age: Although developmentalists have studied social support at different stages of life, few studies permit adequate comparisons of social support across the life course (Vaux, 1985). Among informal networks of adults from a small rural town, age related variations in social support included greater perceptions of support from friends and larger support networks among younger adults (Vaux & Harrison, 1983) although age was unrelated to perceptions of support from spouse or family members. Zautra (1983) examined predictors of well-being and distress among community residents and found young women ages 18 to 24 reported the greatest available social resources with the least available among men 55 or older.

While some studies demonstrate evidence that informal network resources decrease with age (Vaux & Harrison, 1983; Zautra, 1983; Heller & Marsbuch, 1984) conversely, others suggest support increases with age (Lin, Dean & Ensel, 1986), while some find no age related differences regarding perception or receipt of support (Turner & Wood, 1985; Antonucci & Akiyama, 1987; Turner & Noh, 1988; Wellman & Wortley, 1990). Research conducted on a national sample of adults that spans forty-five years (ages 50 to 95) suggests that while one's informal provision of support may deteriorate with age, one's receipt of informal support does not decrease, although the number of informal providers may (Antonucci & Akiyama, 1987). Studies document family members are the first source accessed for emotional and social support as well as in times of crisis (Shanas, 1979; Kessler & Essex, 1982; Shanas & Maddox, 1985; Krause, 1987; Antonucci & Akiyama, 1987; Litwin & Auslander, 1988; Jette, Tennstedt & Branch, 1992). Despite rising concerns over

increasing costs of institutional care for the elderly, the bulk of the senior population reside within the community where most social support is provided by family, friends and neighbors (Shanas, 1979; Shanas and Maddox, 1985; Litwin & Auslander, 1988; Hanley, Wiener & Harris, 1991). Conservative estimates of long-term personal care, transportation, help with errands and household chores provided to the senior population acknowledges family members as the primary care givers meeting at least 80% of elder needs, (Shanas, 1979; O'Brien & Wagner, 1980; Ward, Sherman & LaGory, 1984; Stone, Cafferata & Sangl, 1987; Jette, Tennstedt & Branch, 1992). However, age effects with regard to voluntary participation disappear when socioeconomic elements of income and education are controlled for in the analysis (Cutler, 1976). Additionally, McPherson, Miller and Lockwood (1980, p. 78) identify an "increasing stability of membership in organizations with increasing age."

Gender of the anchor person distinguishes social networks. Women tend to establish more kin based informal networks accessing extended family at times of need more often than men, unless the stressor is financially based, then the reverse is true (Fischer & Oliker, 1983; Wellman, 1985; and Marsden, 1987). Among college students, social support was more strongly associated with well-being for females than males (Sarason, 1983). Burda, Vaux & Schill (1984) find that among college students, females and males possessing a 'feminine sex role' also termed 'expressive' (Bem, 1974) distinguished by "traits of warmth, supportiveness, nurturance and compassion" (Burda, et al. 1984, p.120) are more likely to utilize informal social support resources in times of need.

Wellman and Wortley (1990) find that gender directly relates to social support reporting that females provide more emotional aid than males. While men "exchange less emotional support than do women" (p 577), they typically turn to female family members for emotional support. Since women tend to be a primary provider of informal support to their families, they are at greater risk for detrimental impacts of care giving. Being too close, in both physical and emotional proximity to the person one provides care for, can come with great personal risk. In fact, a care giver can become so absorbed by another's physical needs, the care giver can lose sight of one's own health maintenance (Albrecht & Adelman, 1987).

Studies of receipt of social support demonstrate women utilize more emotional support compared to men (Rosario, Shimm, Morch & Huckabee, 1988; Thoits, 1982; Vaux, 1985; Staker & Wilson, 1984). Kessler, Price, and Wortman (1985), finds that in surveys of help-seeking behavior women are atleast 30% to 50 % more likely identified as a 'helper' and that although men may have larger networks, women tend to be more responsive to network members in times of distress. Flaherty & Richman (1989) argue that gender differences in the acquisition and utilization of social support are due to early socialization experiences. They draw upon developmental studies, parenthood and social support relationships to mental health to explain their findings of medical students. Specifically, they find that females demonstrate greater awareness of their own needs as well as the needs of others and rely more upon social support for psychological well-being than do male medical students (Flaherty & Richman, 1989).

Booth's (1972) study of voluntary participation identified that although women's affiliations were fewer in number and were expressive in nature, women committed more

time to these activities than did their male counterparts who typically reported instrumental type affiliations, greater in number but significantly less in time commitment. However, others argued that these findings were spurious owing to the confounding influence of other variables especially labor force status (Gustafson, Booth & Johnson, 1979; Edwards, Kloubus, Edwards, DeWitt-Watts, 1984).

Ethnicity is important in support access in that groups vary widely in their idea of informal assistance and if receptive to formal support (Shuval, Heishman & Shmueli, 1982, Cruz-Lopez & Pearson, 1985; Chatters, Taylor & Johnson, 1995). Comparisons of Caucasian-American and Asian-American college students lead Uomoto (1983) to conclude that Asian-Americans received significantly less social support from family and friends than Caucasian-Americans. While Asian-Americans received more guidance and advice than Caucasian-Americans, they received less emotional support from informal sources.

Studies by Ball and associates (Ball, Warheit, Vandiver & Holzer, 1979, 1980) compared Caucasian to black, low-income women on social support availability and willingness to utilize available resources. Black women displayed less willingness to ask for assistance from informal sources than their Caucasian counterparts. No differences were found in perceived informal social support among college males (Vaux, 1985) but perceptions of significantly greater family support and less friend support distinguished black college females from their white counterparts.

Anglo, blacks and Hispanics were surveyed in Phoenix, Arizona, to determine if satisfaction with family and friend relationships associated with psychological well-being, positive and negative affect (Ramond, Rhodes & Ramond, 1980). Satisfaction was found to

be an important element in all three ethnic groups, but the impact of satisfaction with family versus friendship ties upon well-being varied in complex ways (Ramond, Rhodes & Ramond, 1980). Well-being was related to satisfaction with friendships for Anglos. Negative affect was related to low satisfaction with friends for Blacks. Psychological well-being for Hispanics was associated with satisfaction with family relationships (Ramond, Rhodes & Ramond, 1980). Cauce, Felner and Primavera (1982) studied structural components of social support among inner-city adolescents. Of particular interest are racial distinctions among levels and sources of social support. Black students reported greater levels of informal social support from family members compared to Hispanics or whites (Cauce, Felner and Primavera, 1982). Evidence of race is conflicting for voluntary participation in community affiliations. Some evidence suggests that white membership and participation exceeds that of blacks (Hyman & Wright, 1971) or that the reverse is true (Tomeh, 1973). When gender is examined, there is no racial distinction (Edwards & Edwards, 1979). This issue then, remains open for inquiry.

Early research of socioeconomic status suggested positive associations with social support (Dohrenwend & Dohrenwend, 1970; Belle, 1982). However, mixed evidence in the literature now demonstrates that perception of social support across income and education levels cloud findings of aggregated measures of socioeconomic status (Turner & Marino, 1992). Ensel (1986) found no distinctions among classes in the appraisal of intimate relationships. Fischer (1982) found voluntary affiliations and more network member contact associated with greater income and education levels, and others, (Ross & Mirowsky, 1989) report mixed findings on this topic.

Although agreement is found that certain demographic variables are positively related with voluntary participation in community organizations, positive findings for income, education and occupation (McPherson & Lockwood, 1984) did not reach significance when influences of other back ground characteristics were controlled (Auslander & Litwin, 1988). Marital status, though, appears to be the least debated in that there is general agreement that married people belong to more organizations and participated more often than those who are not married (Hausknecht, 1962; Babchuk & Booth, 1969; Curtis, 1979).

Demographics and Formal Support:

A society in transition, industrial and economic shifts altering employment opportunity from across town to across the country, divorce, gender role modification, lower birth rates and longevity trends all undermine the utility of traditional care solutions (Brody, 1985). Such forms of social change create drains upon support resources among informal network members often resulting in inequitable distributions of care giving response (Kosberg, 1988) as well as need for professional mental health services.

However, it is also important to note that need for mental health services does not imply patronage of the mental health profession. Link and Dohrenwend (1980) reviewed eleven studies accomplished from 1917 and 1973 of prevalence of psychopathology and utilization of professional mental health services. They concluded that the majority of significantly disordered people were never treated by mental health professionals. Apparently, psychiatric disordered people often seek help from general medical practitioners (Goldberg & Huxley, 1980). Community resident surveys suggest that at least 40% of psychiatric disordered patients seek general over psychiatric medical care (Leaf, 1985).

Additionally, demographics about mental health service use also emerge and are addressed in the following discussion.

Age: A variety of myths about aging believed by the elderly, as well as the general public, appear responsible in part for age related decline in health and well-being. Pathology here-to-fore believed to be a natural consequence of aging has gone unattended because often the elderly in need will not seek professional care on their own (Nuttbrock & Kosberg, 1980; Rowe & Kahn, 1987). Providing too much informal assistance can undermine one's personal sense of control (Rowe & Kahn, 1987) decreasing one's sense of autonomy, fostering dependency (Kahn, 1975). Consequently, informal support network members may be reluctant to offer or provide care to avoid undermining the autonomy of the recipient. Community surveys demonstrate that utilization of mental health services is greatest for those ages' twenty-five to forty-four while those sixty-five and older patronize general medical advice to combat psychiatric symptoms (Veroff, Kulba & Douvan 1981; Fox, 1984; George, 1987). Little is known, however, regarding informal links to formal social support concerning a younger, predominantly healthy population.

Gender: Women are consistently identified as patronizing formal health care services more often than men (Cleary, Mechanic & Greenly, 1982). Women prevalently patronize primary-care physicians for mental health needs (Leaf & Bruce, 1987) and avail themselves more often of outpatient mental health services compared to men who predominate inpatient psychiatric care settings (Taube & Barrett, 1985). Other studies document marginal or no gender differences (Holahan & Moos, 1982; Turner & Noh, 1988). Despite the inclusion of

gender in most of the social support research, empirical findings are inconsistent (Vaux, 1988). It appears that more investigation of this topic merits consideration.

Race or Ethnicity: Anglo, Blacks and Hispanics were surveyed in Phoenix, Arizona, to determine if satisfaction with family and friend relationships associated with overall well-being (Ramond, Rhodes & Ramond, 1980). Formal support from counselors and teachers was related to race depending upon the gender and age of the recipient. Levels of formal support though consistent across age for black and white adolescents, were greater among younger Hispanics (Cauce, Felner and Primavera, 1982).

SES: Although epidemiological surveys demonstrate inverse relationships between socioeconomic status (SES) and mental illness (Link & Dohrenwend, 1980; Robins, 1984), level of education appears to be a more important element than income concerning help-seeking behavior (Veroff, Kulka & Douvan, 1981). Ethnicity and socioeconomic status now account for only slight variations in the proportion of diagnosed patients receiving care in the outpatient psychiatric settings (Veroff, Kulka, & Douvan, 1981; Leaf, Livingston, Tischler, Weissman Holzer, & Myers, 1985).

Research Questions

A review of pertinent concepts and the issues discussed in the literature on informal and formal social support needs and potential explanations for linkages between both sources of support provide a guideline in developing the research questions addressed in this dissertation. The study seeks to advance our knowledge about linkages between informal support from family and community and formal support provided by professional support services. It employs an analysis of 50,867 active duty Air Force members stationed world

wide who were surveyed in the spring of 1993. This study applies informal and formal support theory to examine the extent to which key social relationships predict a person's need for and the use of formal social support services. Consequently the two primary questions of this study are:

- # 1. How does primary (spousal) and secondary (community) informal support relates to the need for formal professional social support services?
- # 2. How does primary (spousal) and secondary (community) informal support relates to the use of formal professional social support services?

Hypotheses Related to Question #1

- 1.1 Controlling for demographic variables, respondents who are married will report need for fewer formal social support services compared to unmarried respondents.
- 1.2 Controlling for demographics, those more satisfied with their marital relationship will report need for fewer formal social support services compared to those less satisfied with their marital relationships.
- 1.3 Controlling for demographics and the level of stress of overseas tour of duty and marital status, respondents who are married and accompanied by their spouse will report need for fewer formal support services compared to those married but unaccompanied by their spouse.
- 1.4 Controlling for demographics, volunteerism, and level of stress of an overseas assignment, those married and unaccompanied on overseas military tours will

report need for more formal social support services compared to those married and accompanied by their spouse.

1.5 Controlling for demographics, respondents who volunteer will report need for fewer formal social support services compared to those who do not volunteer.

1.6 Controlling for demographics, those satisfied with the supportiveness of the community they live in will report need for fewer formal social support services compared to those less satisfied with community supportiveness.

1.7 Controlling for demographics, respondents who are married and volunteer more hours a week will report need for fewer formal social support services compared to those who are not married and volunteer fewer hours a week.

Hypotheses Related to Question # 2

2.1 Controlling for demographics, married respondents will utilize more formal social support services compared to unmarried respondents.

2.2 Controlling for demographics, married respondents on overseas tours and accompanied by spouse will utilize more formal social support services compared to overseas members unaccompanied by their spouses.

2.3 Controlling for demographics, respondents who volunteer will utilize more formal social support services compared to those who do not volunteer.

Overview of the Remaining Chapters

A brief summary of the remaining chapters is now presented. The methodology of this study is described in Chapter 3 including a thorough discussion of the sampling strategy.

It specifies the operationalization of ideas outlined in the conceptual framework together with the measures employed by the researcher in the analyses. Also, it provides a descriptive overview of the study sample as well as a comparison of demographic sample estimates with corresponding population parameters. A descriptive analysis is presented as well as bivariate analyses upon which regression model construction was based. Bivariate findings and the implications of same are then discussed.

Chapter 4 addresses the question of one's need for formal social support in a healthy population hypothesized to be at increased stress levels compared to the greater population. It examines the influence of informal relationships upon need for an array of formal support services reported retrospectively for a twelve month period. Social integration theory is applied to hypothesis construction predicting associations between informal relationships of interest and the need for professional support services. The primary and secondary informal relationships of interest are the presence of a spouse and presence of a community tie through volunteerism, respectively. Satisfaction with these relationships is also examined. Chapter 4 addresses the question of one's need for formal social support in a healthy population hypothesized to be at increased stress levels compared to the greater population.

Chapter 5 addresses the question of one's use of formal social support. It examines the influence of informal relationships upon use of services that correspond to the need for formal support services expressed by respondents. Complementary theory is applied to hypothesis construction predicting association between informal relationships of interest and the use of professional support services. Again, the primary and secondary informal relationships of interest are the presence of a spouse and presence of a community tie through

volunteerism, respectively. Physical availability of one's spouse for a subsample of overseas respondents is also examined. The final chapter summarizes major findings of the dissertation, discusses contributions of the findings to the literature, and suggests implications of the dissertation research for future social support policy and research. Limitations of the study are also discussed.

CHAPTER 3

METHODOLOGY

The Air Force Needs Assessment Survey

This dissertation employs survey data that were gathered by the Air Force Family Matters Office (AFFAM) at Air Force Head Quarters at the Pentagon. AFFAM was established in 1980 as an institutional response to rising demands of military family members (Military Family Resource Center, 1993). Charged with responsibility for enhancing family adaptation to military life AFFAM instituted The Family Support Center agency to assist family members in obtaining adequate human service delivery. The agency grew from 7 sites in 1981 to 101 in 1993 and renders services believed to promote member and family adjustment to a military lifestyle. Ultimately, the formal support provided by the Family Support Center positively influences member retention and combat readiness indirectly (Orthner, 1992).

Consequently, AFFAM collects data and supervises research to stay abreast of trends in member and family needs and service utilization. Permission to employ the data set used in

this dissertation was obtained from Lt. Col. Wolpert, Chief of Family Research at AFFAM, (Correspondence from Lt. Col. Wolpert, Appendix C).

Sampling Plan

A stratified random probability sample of active duty Air Force members were drawn from the total Air Force population assigned to 101 bases that had a Family Support Center located on base, thereby enhancing generalizability of findings. The disproportionate sample was drawn from a worldwide Air Force data base with sample numbers and weightings based upon grade of pay and population size for each base. Lower socioeconomic status of grades E1 to E3 were oversampled to compensate for typically low response rates from this subgroup.

The stratified random sampling procedure provides the opportunity to examine subgroups in sufficient numbers to enhance confidence in findings. This sample stratified rank, gender and race to promote a representative sample composition. Disproportionate sampling weight given to E1 - E3 of 1.5 addressed potential confounds of historically low respondent rates for this socioeconomic status. Roughly 50% of active duty military members selected for inclusion in the study responded to the anonymous mailing raising questions of external validity. However, the respondents in the sample appear to be comparable to the greater Air Force population regarding rank composition with 81.1% enlisted and 19.9% officer. Complete demographic comparisons are presented in the descriptive overview section.

Data Collection Procedures

The instrument employed in the survey is The Needs Assessment Survey instrument and was designed by Caliber Associates, a private research company, contracted by the Air Force Family Matters Office at the Pentagon. The survey was mailed to 200,000 unmatched military members and military spouses (100,000 to active duty members and 100,000 to military spouses). The military member response rate was roughly 51% comprised of 50,867 military members. Although the sample is a probability sample enhancing generalizability of findings to the target population, response rates somewhat diminish external validity.

A letter of explanation from Brigadier General Charles R. Heflebower, Director of Personnel Programs for the Air Force (Appendix B) accompanied the survey that was mailed to selectees by the Family Support Center (FSC) Directors. FSC Directors collected and forwarded response surveys to the National Computer Systems (NCS) in Endina, Minnesota for data assemblage after which the University of North Carolina's Human Services Research and Design Laboratory performed descriptive data analysis. Data collection occurred between April 1993 and September 1993.

Operationalization of Concepts and Measurements

Each questionnaire item as it appeared in the instrument along with corresponding variable name is noted in Table 3.0a. The level of measurement of each item is also annotated. The coding scheme of each variable is noted in Table 3.0b. Each variable is identified as dichotomous, categorical or continuous. Dichotomies were coded as zero or one and continuous variables were coded on a continuum as prescribed in the coding scheme

column of Table 3.0b. Dummy variables were constructed to represent each class of a categorical variable except the referent class.

Predictor Variables

Informal social supports are conceptualized as the "presence of" and "satisfaction with" or "commitment to" primary and secondary social relationships including marital relationship and community voluntary participation. These key relationships comprise the independent variables in the study. I shall discuss each briefly. A review of literature reveals that the strongest predictor of social support is the presence of an intimate confiding relationship (Cohen & Willis, 1985; Kessler & McLeod, 1985; House et al, 1988). This indicator is conceptualized as "presence of a spouse" determined by one's response to question # 5 that asks for one's marital status. "Presence of a community relationship" is considered as a secondary form of social support and is operationalized by one's response to question #12 that inquires about volunteerism over the past 12 months. Both variables, "presence of a spouse" and "presence of a community relationship," are dichotomous variables coded as "0" for no tie and "1" if a relationship existed.

A measure of satisfaction level with these relationships is accomplished with response to question 37 that asks the respondent to directly rate how satisfied one is with each informal tie. Satisfaction measures fashioned from question 37 are continuous variables coded on a continuum from least to most satisfied with each respective relationship. One's degree of commitment to one's community is measured through question 13 that asks the number of hours one volunteers in one's community each week. The number of hours of volunteerism is a continuous variable.

Finally, geographic relocation for some military members results in separation from a spouse and is represented by the variable called availability of spousal support (Avspouse). This variable is operationalized first with question # 5 to discern those who are married, then with question # 21, that asks for those members assigned overseas to indicate whether they are accompanied by family. Spouse availability is a dichotomous variable coded as "0" for spouse not available and "1" for spouse is available at the overseas duty station.

Control Variables

Level of stress experienced in conjunction with geographic relocation is considered as a control variable accomplished by response to questions 54 that directly gauges amount of stress one experienced in conjunction with their most recent work related geographic relocation. This variable is measured as a continuous variable and coded as prescribed in Table 3.0b. Demographic variables comprise the balance of control variables for this study and include gender, age, education, race or ethnicity, pay grade, and number of military service years. Military rank is employed as a proxy variable for income. Operationalization of these variables is accomplished by responses to questions 1, 2, 3, 4, 18, and 20. Gender is a dichotomous variable coded as "0" for female and "1" for male. Race is a categorical variable coded both as noted in Table 3.0b and as 3 separate dummy variables for inclusion in regression analysis. Age, education, pay grade, and numbers of military years of service are all continuous variables coded as prescribed in Table 3.0b. Please refer to Tables 3.0a and 3.0b where all instrument questions and coding schemes employed in this study are listed.

Outcome Variables

Formal social supports are conceptualized as professional social services. The need for or use of professional social services comprises the social outcome measures of dependent variables for both questions #1 and #2 of this study. The survey includes a host of questions targeting specific social services asking respondents about the need for and satisfaction with use of formal services. Categories of need identified in question #38 are as follows: financial information, single parent, transportation, education, transition information and assistance, community service, relocation, child, family, spouse, family member employment and special needs of family member with disabilities. Each of the 16 categories identifies no less than five possible types of problems that pertain to each need category for a total of 119 needs. Respondents acknowledge all problems that pertain to each need category rendering a response of "need for" a specific service category. The continuous variable termed "need" for formal social support was constructed as a continuous variable summed across all 16 need categories to produce a raw score total.

Respondents were also asked that for services needed, if they were "satisfied" or "dissatisfied" with services they received to address the reported need. The variable "use" of formal support services was then constructed by summing the total of all satisfied and dissatisfied responses to yield a continuous variable for service utility. The responses to question 38 (Reference copy of instrument Appendix A) provide the data for dependent measures of questions #1 and #2.

Instrument Development--

The instrument employed to gather information was developed by Caliber Associates. It was modeled after one used by the US. Army. A dissertation employing this data set has been requested for review (Albano, 1995). Attached in Appendix A is a copy of the instrument from which I extracted the questions discussed previously.

Coding Scheme --

Variable type and how the variable was employed in the regression analysis is located in Table 3.0b. Each variable is distinguished as dichotomous, categorical or continuous consistent with the regression analysis plan. While some variables are differentiated as dichotomous, these variables are typically treated as categorical in the analysis phase.

Table 3.0a

Measurements and Variables

Questionnaire items as they appear in the instrument	Variable Name
Identification Variable-	
Military Association:	STATUS
15. What is your current association with the Air Force?	
Active duty military member	
Spouse of active duty	
Both my spouse and I are active duty	
Demographic Measures-	
Gender measurement:	SEX
1. Are you? (Nominal)	
Male Female	
Age measurement:	AGE
2. What is your current age? (Ratio)	
(write in the number)	
Education measurement:	EDUC
3. What is the highest level of education you have completed? (Ordinal)	
Less than high school, but no diploma or GED	
High school with diploma or GED	
Up to 2 years of college, but no degree	
Associate's degree	
Technical/vocational degree (RN, electrician, etc.)	
3 or more years of college but no degree	
College graduate	
Post graduate study or degree	
Race measure:	RACE
4. What is your racial/ethnic background? (Nominal)	
White, not of Spanish/Hispanic origin	
Black, not of Spanish/Hispanic origin	
Spanish/Hispanic origin	
Asian/Pacific Islander	
American Indian/Aleut/Alaskan Native or Other	

Table 3.0a

Measurements and Variables

Questionnaire items as they appear in the instrument			Variable Name
Rank			GRADE
18. What is you or your spouse's rank or pay grade? (interval/ratio)			
___ E1 (AMN Basic)	___ E5 (SSGT)	___ E9 (CMSGT)	___ O4 (MAJ)
___ E2 (AMN)	___ E6 (TSGT)	___ O1 (2 LT)	___ O5 (LTC)
___ E3 (AMN 1 st)	___ E7 (MSGT)	___ O2 (1 LT)	___ O6 (COL)
___ E4 (SGT)	___ E8 (SMSGT)	___ O3 (CAPT)	___ O7 - O10 (GEN)
20. How much active duty military service have you or your spouse completed? (interval/ratio)			MILYRS
Fewer than 12 months 9-12 years			
1-2 years 5-6 years 13-19years			
3-4 years 7-8 years 20 or more years			
Marital measure-			
5. What is your current marital status? (Nominal)			WED
Married to active duty military member			
Married to civilian			
Legally separated or filing for divorce			
Not married (Divorced, widowed, never married)			
37. How satisfied are you with relationship you have with your spouse? (Ordinal)			SPRLTN
Very satisfied			Very dissatisfied
Satisfied			N/A or don't know
Dissatisfied			
Community Measure-			
12. To which of the following organizations have you volunteered in the past 12 months? (Nominal)			VOLONG (1-6)
I did not volunteer			American Red Cross on base
Chapel on base			Air Force Family Support Center (FSC)
Other on-base services			Off-base services

Table 3.0a Measurements and Variables

Questionnaire items as they appear in the instrument	Variable Name
13. On the average, how many hours per week do you typically provide volunteer service? (Ordinal) I do not volunteer Less than 1 hour 1 - 2 hours 3 - 4 hours 5 - 6 hours 7 - 10 hours 11 or more hours	HRSVOL
37. How satisfied are you with the supportiveness of the community you live in? (Ordinal) Very satisfied Very dissatisfied Satisfied Dissatisfied	COMMSUP
Stressor Measure:	
21. What type of overseas tour are you or your spouse on? I am not on an overseas tour. (nominal) I am on an overseas tour but have no dependents. I am on a command sponsored overseas tour, accompanied by my family. I am on a command sponsored overseas tour, not accompanied by my family. I am on a non-command sponsored overseas tour, accompanied by my family. I am on a non-command sponsored overseas tour, not accompanied by my family.	TOUR1-6
54. Overall, how stressful was this PCS (Permanent change of station) move? (Ordinal) Very stressful Moderately stressful Slightly stressful Not stressful	STRESPCS (1-4)
Formal Service Provision Variables-	
38. FIRST, mark column 1 if you needed the service during the last 12 months (Nominal) during the last 12 months (Nominal) SECOND, mark if you were satisfied or dissatisfied with services you used (Nominal)	NEED 0-119 SATIS 0-119

Please reference the instrument to review the 16 categories of services containing a total of 119 needs and services used pertinent to this question.

Table 3.0b Coding Scheme of Measurements and Variables

Variable Type	Coding Scheme	Name
Identification Variable-		STATUS
Military Association: Used to identify sample respondents planned for this study Those coded 1 represent the active duty members in this sample.		
15. What is your current association with the Air Force?		
Active duty military member	1	
Spouse of active duty	2	
Both my spouse and I are active duty	1	
Demographic Measures-		
Gender measurement: dichotomous		SEX
1. Are you?		
Male	0	
Female	1	
Age measurement: continuous		AGE
2. What is your current age? (the number of years)		
Education measurement: developed into a continuous variable.		EDUC
3. What is the highest level of education you have completed?		
Less than high school, but no diploma or GED	1	
High school with diploma or GED	2	
Up to 2 years of college, but no degree	3	
Associate's degree	4	
Technical/vocational degree (RN, electrician, etc.)	4	
3 or more years of college but no degree	5	
College graduate	6	
Post graduate study or degree	7	
Race measure: collapsed into a 4 class categorical variable		RACE
4. What is your racial or ethnic background?		
White, not of Spanish/Hispanic origin	1	
Black, not of Spanish/Hispanic origin	2	
Spanish/Hispanic origin	3	
Asian/Pacific Islander	4	
American Indian/Aleut/Alaskan Native	4	
or Other	4	

Table 3.0b Coding Scheme of Measurements and Variables

Variable Type	Coding Scheme	Name
Rank: Continuous variable	Coded 1 through 16	GRADE
18. What is you or your spouse's rank or pay grade?		
___ E1 (AMN Basic)	___ E9 (CMSGT)	
___ E2 (AMN)	___ O1 (2 LT)	
___ E3 (AMN 1 st)	___ O2 (1 LT)	
___ E4 (SGT)	___ O3 (CAPT)	
___ E6 (TSGT)	___ O4 (MAJ)	
___ E5 (SSGT)	___ O5 (LTC)	
___ E7 (MSGT)	___ O6 (COL)	
___ E8 (SMSGT)	___ O7 - O10 (GEN)	
20. How much active duty military service have you or your spouse completed? Continuous variable coded 1 through 8.		MILYRS
Fewer than 12 months	1	
1-2 years	2	
3-4 years	3	
5-6 years	4	
7-8 years	5	
9-12 years	6	
13-19 years	7	
20 years or more	8	
Marital measure-		
5. What is your current marital status? collapsed into a dichotomous variable.		MARRIED
Married to active duty military member	1	
Married to civilian	1	
Legally separated or filing for divorce	0	
Not married (Divorced, widowed, never married)	0	
21. What type of overseas tour are you or your spouse on?		AVSPOUSE
TOUR1-6 is planned for a subsample analysis where availability of spouse is examined. Pertinent categories are collapsed into a dichotomous variable.		
I am overseas and not accompanied by my family	0	
I am overseas and accompanied by my family	1	

Table 3.0b Coding Scheme of Measurements and Variables

Variable Type	Coding Scheme	Name
37. How satisfied are you with relationship you have with your spouse? Continuous variable.		SPRLTN
Very dissatisfied	1	
Dissatisfied	2	
Satisfied	3	
Very satisfied	4	
(NA category is dropped. Considering the frequency of this category closely corresponds with the number of unmarried, this category likely pertains to those who are not married.)		
Community Measure-		
12. To which of the following organizations have you volunteered in the past 12 months? VOLNG1-6 is divided into a dichotomous variable of whether or not one volunteered.		VOLNTER
I did not volunteer	0	
American Red Cross on base	1	
Chapel on base	1	
Air Force Family Support Center (FSC)	1	
Other on-base services	1	
Off-base services	1	
13. On the average, how many hours per week do you typically provide volunteer service? Continuous variable coded 0 through 6.		HRSVOL
I do not volunteer	Less than 1 hour	
1 - 2 hours	3 - 4 hours	
5 - 6 hours	7 - 10 hours	
11 or more hours		
37. How satisfied are you with the supportiveness of the community you live in? (Ordinal)		COMMSUP
Very dissatisfied	1	
Dissatisfied	2	
Satisfied	3	
Very satisfied	4	
(NA/DK category is dropped because there is no way to discern NA from DK).		

Table 3.0b Coding Scheme of Measurements and Variables

Variable Type	Coding Scheme	Name
Stressor Measure:		
54. Overall, how stressful was this PCS (Permanent change of station) move? Continuous variable.		STRESS
Not Stressful	1	
Slightly stressful	2	
Moderately stressful	3	
Very stressful	4	
Formal Service Provision Variables-		
38. FIRST, mark column 1 if you needed the service during the last 12 months All 119 needs identified in question # 38 are summed for a raw score and is a continuous variable.		NEED
SECOND, mark if you were satisfied or dissatisfied with services you used. All 119 satisfaction responses to question # 38 are summed for a raw score and becomes a continuous variable		USE

Data Analysis Plan

The following analysis plan pertains to data collected from 50,867 active duty military Air Force members who anonymously completed and returned a mailed survey in 1993. Data was analyzed on my personal computer using SPSS for Windows, 5.0.1 statistical analysis program.

Descriptive Analysis

Univariate, bivariate and multivariate statistics were employed to analyze the data. Descriptive statistical techniques were applied to all variables planned in this study to develop an understanding of the structure of each variable. Descriptive analyses of social relationship

dimensions include frequency distributions for nominal and ordinal data and measures of central tendency and standard deviation for interval and ratio data as follows: presence of a spousal relationship, satisfaction with spousal relationship, availability of spousal support, presence of a community volunteer relationship, satisfaction with community relationship, commitment to community volunteer relationship, geographic relocation stress, need for professional social support services and use of professional social support services.

Analyses were also conducted to determine if social relationship dimensions differ significantly regarding age, ethnicity or race, sex, education, pay grade, or number of years of military service. For categorical variables bivariate analyses were accomplished using contingency tables with Cramer's V measure of association and Chi Square test of significance. When dealing with combinations of categorical and continuous data such as race and degree of community involvement, contingency tables were constructed and Eta Squared measure of association and Chi Square test of significance was applied. Also, t-tests using a Student's t statistic for testing the significance of a difference in means were employed to examine dichotomous categorical variables. Analysis of variance was applied to analyze categorical variables with more than 2 groups testing with an F statistic for significance. Pearson correlation coefficient measure of association and test of significance were applied to examine continuous variable combinations.

Inferential analysis

The method of Ordinary Least Squares Estimate (OLS) was implemented as the primary data analysis plan. This multiple regression technique facilitates the examination of both categorical and continuous variables as well as combinations of the two as independent

variables. Models were constructed consistent with OLS regression assumptions. Analyses of both individual and combined effects of a group of predictor variables on continuous outcome variables were conducted employing this method. The strength and significance of association of each independent variable while controlling for all other variable influence in the model were determined.

The researcher approaches this analysis with a focus on hypothesis-testing, consistent with convention. The hypothesis-testing procedure permits an investigator to examine questions of interest subject to probabilities of chance findings determined by the researcher before the procedure. Establishing the probability of a Type I error, the researcher determines the significance level that is acceptable for the chance of rejecting the null hypothesis when it should be retained (Schroeder, Sjoquist, & Stephan, 1986). The probability of a type II error is referred to as beta and is the margin of chance set in advance of the study by the researcher that one does not reject the null hypothesis when it should be rejected (Marascuilo & Serlin, 1988).

First, results from univariate analysis were examined to describe frequencies and distributions upon which other analytic considerations were based. Data was inspected to ensure assumptions of OLS were met prior to OLS analysis. Histograms, frequency tables and descriptive statistics' tables were constructed to aid in the inspection of data. It was expected that new variables may emerge from these analyses enhancing planned comparisons suggested by hypotheses of the study. Bivariate analysis included use of a correlation matrix of relationships between continuous variables and categorical variables coded dichotomously.

Multiple regression was conducted in a hierarchical fashion thereby isolating each set of variables for inspection of its unique contribution while controlling for other variable influence. Analysis of variance (ANOVA) was used where and when appropriate. Categorical data was transformed into dummy codes for the regression analyses. Contributions by subgroups were evaluated to prevent spurious findings that may lead to overlooking statistically significant variables for the final models.

Descriptive Overview of the Study Sample

Descriptive statistics on pertinent demographic variables for this cross-sectional survey sample of 50,867 respondents are displayed in Table 3.1. Sample demographic estimates are tabled with corresponding Air Force population parameters in Table 3.2. Informal support characteristics of survey respondents are noted in Table 3.3 and formal support outcomes are located in Table 3.4.

Demographic Characteristics of Survey Respondents

Demographic characteristics of sample respondents are noted in Table 3.1. The mean age of respondents was 30.5 years and ranged in age from 17 to 67. Fifty percent of the respondents were ages 17 through 30. Roughly two thirds of the sample respondents were younger than 34 years old and age 21 was reported most often by respondents. Males outnumbered females at a ratio of 4 to 1 with gender split at 80.8% male and 19.2% female. Respondents tended to be white representing 79.3% of the sample, 10.8% Black, 4.5%

Spanish or Hispanic and 5.3% other race or ethnicity. The average military member has attended college but has yet to graduate at the bachelor's level (N = 20,551).

Rank and pay grades of respondents are roughly equivalent indicators of socioeconomic status and are used as a proxy for income. The mean pay grade fell within the E6 pay grade suggesting that the average respondent was roughly equivalent to Technical Sergeant in rank. As enlisted and officer ranks are divided in the military community they will be discussed separately. 78.3% of the respondents are of the enlisted rank (N = 39,104) and 21.7% are officers (N = 10,869). The modal rank response for enlisted is an E4 of 9,071 or 18.2% of the sample and O3 rank for officers of 4,419 representing almost 8.8%. Members with less than 12 months service comprise 1,864 and are the smallest category of service years representing 3.7% of the sample. The mean number of years of active military service fell within 7 to 8. Those with 13 to 19 military service years comprise the modal response accounting for 14,043 members or 27.9%.

Surveys were mailed by Caliber Associates to bases for distribution in April 1993 and collected by the close of September 1993. A force reduction of 13.4 percent personnel occurred between June 1993 and March 1994 (Department of Defense, 1994). Population statistics employed for comparison purposes were acquired from Head Quarters Air Force Military Personnel Center current as of March 31, 1994, and overlap this force reduction period (HQ AFMPC/DPMYAP, 1994). Sample and population demographic characteristics are listed in Table 3.2

Table 3.1 Demographic Overview of Active Duty Air Force Survey Respondents

Demographic Variables	Frequency	%	Mean	SD	Range	N
SEX						48475
Male	39160	80.8				
Female	9315	19.2				
AGE	Reported by number of years		30.50	7.51	17-67	48076
AGE1	Age Collapsed		3.27	1.50	17-67	48076
17 to 21	6217	12.9				
22 to 26	10910	22.7				
27 to 31	9987	20.8				
32 to 36	9545	19.9				
37 to 41	7364	15.3				
42 and older	4052	8.4				
EDUC	Highest level of education					59284
less than high school	35	.1				
high school	16021	31.9				
up to 2 years college	13077	26.0				
Associates of Arts	5492	10.9				
3 or more years of college	1982	3.9				
college graduate	4681	9.3				
post graduate study	8996	17.9				
RACE	What is your racial/ethnic background?					50275
White, not Spanish origin	39859	79.3				
Black, not Spanish origin	5448	10.8				
Spanish/Hispanic origin	2281	4.5				
other	2687	5.3				

Table 3.1 Demographic Overview of Active Duty Air Force Survey Respondents (cont)

Demographic Variables	Frequency	%	Mean	SD	Range	N
GRADE rank or pay grade?						49973
E1	75	.2				
E2	2397	4.8				
E3	6256	12.5				
E4	9071	18.2				
E5	8323	16.7				
E6	6254	12.5				
E7	4873	9.8				
E8	1224	2.4				
E9	631	1.3				
O1	736	1.5				
O2	1104	2.2				
O3	4419	8.8				
O4	2254	4.5				
O5	1634	3.3				
O6	672	1.3				
O7 TO O10	50	.1				
MILYRS Active duty military service						50423
< 12 mos	1864	3.7				
1-2 yrs	7485	14.8				
3-4 yrs	5732	11.4				
5-6 yrs	4627	9.2				
7-8 yrs	4629	9.2				
9-12 yrs	7702	15.3				
13-19 yrs	14043	27.9				
20 yrs or more	4341	8.6				

Table 3.2 Demographic Comparison of Survey Sample and Air Force Population Parameters

Variable	Survey Respondents n = 50867		Air Force Population N = 431052	
	Frequency	Percent	Frequency	Percent
SEX				
Male	39160	80.8	364938	85.0
Female	9315	19.2	66114	15.0
RACE				
White, not Spanish	39859	79.3	338,231	79.0
Black, not Spanish	5448	10.8	63365	15.0
Spanish\Hispanic origin	2281	4.5	15101	3.0
Other	2687	5.3	14355	3.0
EDUC highest level completed				
less than high school	35	.1	31	.007
high school with diploma	16021	31.9	74120	17.2
some college	20551	40.8	260707	60.5
college graduate	4681	9.3	45200	10.5
post graduate study	8996	17.9	50425	11.7
GRADE pay grade				
E1-E3	8728	17.5	77799	18.0
E4-E6	23648	47.5	224839	52.2
E7-E9	6728	13.5	46914	10.9
01-03	6259	12.5	49732	11.5
04-05	3888	7.8	27104	6.3
06-010	722	1.4	4664	1.1

Respondents tended to be male at 80.8% compared to the Air Force population of 85% male. Survey respondents were 79.3% white compared to 79% in the population. Survey respondents were 10.8% Black, 4.5% Spanish or Hispanic, and 5.3% other race or ethnicity compared to population parameters of 15% Black, 3% Spanish or Hispanic and 3% other race. Enlisted ranks comprised 78.3% compared to the Air Force population of 81.1% (HQ AFMPC/DPMYAP, 1994). Officer ranks comprised 21.7% of survey respondents compared to 18.9% officer rank held in the population (HQ AFMPC/DPMYAP, 1994). Discrepancies between sample estimates and population parameters are few but merit discussion.

Males are underrepresented in the sample by 4 percent while females are overrepresented by 4 percent compared to the population. There are 4 percent fewer Blacks in the sample and 2 percent more Spanish or Hispanic and 2 percent more other race category compared to the population. Perhaps the largest discrepancies occur in the education categories that correspond to the greatest number of years of education one completed. Survey respondents whose greatest education level was high school completion represented 32% and those with some college attendance were 41% of the sample compared to 17% high school graduates and 60% with college attendance found in the population. These discrepancies may result from the personnel transition that took place during the time of the survey. However, the sampling plan of overrepresentation of lowest rank respondents likely played a primary role in this education difference. Despite these discrepancies, demographic characteristics of the sample respondents appear representative of the Air Force population overall.

Informal Support Resources Available--

Informal support characteristics of respondents are shown in Table 3.3. Married members comprised 67.4% of the sample similar to the population at 69% according to the Air Force Military Personnel Center (HQ AFMPC/DPMYAP, 1994). Respondents were asked to evaluate satisfaction level with the relationship with their spouse. Most expressed some level of satisfaction with their marital tie as 65.1% were very satisfied, 26.1% were satisfied, 5.2% were dissatisfied and 3.5% were very dissatisfied. Respondents who were married and overseas comprised 16.6% of the sample (N = 8,430) and of these respondents, 81.6% were accompanied by their spouse while 18.4% did not have their spouse available for social support.

The sample was almost evenly divided concerning a community tie through volunteerism with 50.4% volunteering. The majority of volunteers contribute 2 or fewer hours each week to some organization either on or off the base to which they were assigned representing 34.8% of the sample. Satisfaction levels with community support were more favorable than not with 79.1% satisfied or very satisfied and 29.9% dissatisfied or very dissatisfied.

Formal Support Needs and Services Utilized

Respondents were asked to consider 119 different social support needs and to identify all needs that occurred over the prior 12 month period. Additionally, respondents were asked that for those needs for which services were sought, to render an evaluation of how satisfied

they were with the profession social support services they received. Descriptive findings are shown in Table 3.4.

Table 3.3 Informal Support Characteristics of Sample Respondents

	Frequency	Percent
Marital Status		
not married	16538	32.6
married	34201	67.4
Satisfaction with Spousal Tie		
very dissatisfied	1204	3.5
dissatisfied	1789	5.2
satisfied	8907	26.1
very satisfied	22231	65.1
Spouse Availability		
overseas without a spouse	1553	18.4
overseas with a spouse	6877	81.6
Volunteerism		
did not volunteer	25098	49.6
did volunteer	25501	50.4
Number of Hours Volunteered		
do not volunteer	24704	49.0
< 1 hr	8915	17.7
1-2 hrs	8612	17.1
3-4 hrs	4556	9.0
5-6 hrs	1844	3.7
7-10 hrs	1053	2.1
11 or >	768	1.5
Satisfaction with Community Support		
very dissatisfied	2688	6.4
dissatisfied	6115	14.5
satisfied	27752	65.7
very satisfied	5654	13.4

Table 3.4 Formal Support Needs and Formal Service Utilization of Survey Respondents

	Mean	Mode	Std dev	Range	Modal n	Modal %	Total N
Needs	10.38	5.00	12.967	0-119	3609	7.1	50876
Use	8.12	0.00	9.520	0-119	4453	8.8	50876

The mean number of needs reported by respondents was 10.38 with 5 needs being the modal response for 7.1% or 3,609 members. Roughly two thirds of the sample range between no needs for 3,284 respondents, and the mean of 10.38, accounting for 33,537 members. The mean number of services sought was 8.1 while the modal response was not to seek professional support representing 8.8% of respondents.

Bivariate Analysis

On the basis of the Neyman and Pearson (1928, 1933) formulation, Cohen (1988) posited the exact size of the effect an experiment is designed to detect. Cohen (1988, p.12) offered measures of "small, medium and large to serve as operational definitions" to describe the effect size one would achieve for each statistical test applied, subject to significance criterion and size of the sample. One may think of effect size as the degree to which the phenomenon under study occurs in the population (Cohen, 1975). Consequently, the power of a statistical test is contingent upon three aspects of any design: "the significance criterion, the reliability of the sample results, and the effect size (ES)" (Cohen, 1988, p.4).

Cohen (1988) assembled tables of effect size indices that corresponded to the most frequently used statistical tests contingent upon significance criterion and sample size. These conventional terms of small, medium and large effect sizes set forth by Cohen (1988) are applied here as a loose framework within which to interpret bivariate statistical findings. Although effect size indices were developed for the purposes of conducting power analyses with classical experimentation in mind, they are a useful tool in discerning among numerous statistically significant findings typically generated by utilizing large samples. Therefore, empirical findings of statistical significance that are not of sufficient strength to equal or exceed Cohen's (1988) criterion for "small" will be omitted from this discussion. Cohen's (1988) recommended values for small, medium and large effect sizes and corresponding statistical tests are assembled below for the reader's convenience. Cohen's (1988) table values are constructed below based upon the minimum criterion of $\alpha = .01$, $\beta = .10$, and $n \geq 1,000$. Page numbers from Cohen's (1988) tables for the location of the values reported in Tables 3.5a, b and c are also included for the reader's convenience.

Table 3.5a Statistical Tests and Corresponding Values for Small Effect Size

Statistical Test	Statistic	Value	Page
Contingency Table	Cramer's Correlation Coefficient - V (when $k = 4$)	.058	222
ANOVA	Correlation Ratio, Eta - π	.100	283
Correlation Matrix	Pearson Correlation Coefficient - r	.100	82
Correlation Matrix	Point Biserial Correlation Coefficient - r_{pb}	.100	82
T-Test	Standardized Differences Between Means - d	.200	82

Table 3.5b Statistical Tests and Corresponding Values for Medium Effect Size

Statistical Test	Statistic	Value	Page
Contingency Table	Cramer's Correlation Coefficient - V (when $k = 4$)	.173	222
ANOVA	Correlation Ratio, Eta - π	.243	283
Correlation Matrix	Pearson Correlation Coefficient - r	.300	82
Correlation Matrix	Point Biserial Correlation Coefficient - r_{pb}	.243	82
T-Test	Standardized Differences Between Means - d	.500	82

Table 3.5c Statistical Tests and Corresponding Values for Large Effect Size

Statistical Test	Statistic	Value	Page
Contingency Table	Cramer's Correlation Coefficient - V (when $k = 4$)	.289	222
ANOVA	Correlation Ratio, Eta - π	.371	283
Correlation Matrix	Pearson Correlation Coefficient - r	.500	82
Correlation Matrix	Point Biserial Correlation Coefficient - r_{pb}	.371	82
T-Test	Standardized Differences Between Means - d	.800	82

Bivariate Results

The following discussion addresses the first goal of this dissertation namely, to explore whether demographic characteristics are related to primary (spousal) and secondary (community) informal support and to formal professional support outcomes for inclusion in explanatory models as control variables.

Demographics Relationship

Age is weakly associated with gender ($r_{pb} = .137$) with males significantly older than females (Levene's Test for Equality of Variances: $F = 86.476, p = .000$. Unequal variance values are given as $t = 31.60; df = 14.61, two-tail p = .000$) as the average age of males is 30.97 and females is 28.36 years of age. *Age* and *education* are strongly and significantly associated ($r = .4953, p = .000$) as are *age* and *pay grade* ($r = .6648, p = .000$) and *age* and the *number of years one is in service* ($r = .8774, p = .000$).

Gender is weakly associated with *the number of years one is in service* ($r_{pb} = .1606$, with males significantly senior to females ($t = 35.69, df = 48,071, two-tail p = .000$). The mean for the number of service years for males was 5.2 compared to females with 4.3 years. *Gender* and *race* relate slightly but significantly ($V = .08142$ where $k = 4, \chi^2 = 317.86, df = 3, p = .0000$) as white, male respondents comprise 65% of the sample.

Socioeconomic indicators share moderate to strong relationships. Respondents' highest level of *education* completed and *pay grade* are strongly and significantly related ($r = .8279, p = .000$) while *education* and *number of years in military service* are moderately and significantly related ($r = .3070, p = .000$). The *number of service years* and *pay grade* were strongly and significantly related ($r = .5166, p = .000$).

Demographic and Informal Social Support Trends

Age and *marital status* were moderately and significantly related ($r_{pb} = .3869$) as married respondents were significantly older than those unmarried (Levene's Test for Equality of Variances: $F = 171.620, p = .000$, unequal variance statistics: $t = 94.23, df = 33,126, two-tail, p = .000$). The mean age for marrieds was 32.5 compared to unmarrieds of 26.3. People who volunteer tend to *commit more time to the community* as

they *age* as these variables were weakly but significantly related ($r = .1212$, $p = .000$). Also weakly but significantly related with *age* was *degree of satisfaction with community support* ($r = .1225$, $p = .000$) and levels of *stress* ($r = .1114$, $p = .000$).

Although weakly related, *socioeconomic status* was positively related to *satisfaction level with community support as pay grade* ($r = .1577$, $p = .000$) and *education level* ($r = .1255$, $p = .000$) were both weakly but significantly associated with community support satisfaction level.

Gender ($\chi^2 = 564.26$, $df = 1$, $p = .0000$) and *education* ($r_{pb} = .1794$) were both weakly but significantly associated with *marital status*. Those married tended to be male and more educated (Levene's Test for Equality of Variances: $F = 1021.91$, $p = .000$ Unequal variance statistics: $t = 42.47$, $df = 35837.23$, two-tail $p = .000$). *Pay grade* was positively related to being *married* and demonstrated a slightly stronger relationship ($r_{pb} = .2657$) that was statistically significant (Levene's Test for Equality of Variances: $F = 714.42$, $p = .000$; Unequal variance statistics: $t = 64.13$, $df = 35099.21$, two-tail $p = .000$).

The *number of years of military service* was moderately related to *marital status* ($r_{pb} = .4208$) with married respondents having increased duration of military service compared to unmarried respondents (Levene's Test for Equality of Variances: $F = 691.37$, $p = .000$ Unequal variance statistics: $t = 100.16$, $df = 29177.55$, two-tail $p = .000$). A weak but significant positive association was also found for increased *satisfaction level* with *community support* ($r = .1003$, $p = .000$) and *military service duration*. The *number of hours per week one volunteers* is significantly related to *military service duration* although the strength of the association is weak ($r = .1230$, $p = .000$). Also *military service years* was weakly but significantly related to *level of stress* ($r = .1190$, $p = .000$).

Informal Social Support Trends

Marital status and *stress* were weakly but significantly related ($r_{pb} = .1917$, $p = .000$) as married respondents reported greater levels of stress compared to unmarrieds ($t = 38.22$, $df = 38262$, two-tail $p = .000$). *Satisfaction level with one's marital tie* and *satisfaction level with one's community support* were positively and significantly related also at a weak level ($r = .1037$, $p = .000$). *Satisfaction level with one's marital relationship* and the *availability of one's spouse* on overseas tours was positively and significantly related at a weak level ($r_{pb} = .1307$, $p = .000$). *Marital status* and *spouse availability* were moderately ($V = .3927$, $k=2$) but significantly related, ($\chi^2 = 1204.32$, $df = 1$, $p = .0000$). *Race* and *spouse availability* were weakly ($V = .0777$, $k = 4$) but significantly related ($\chi^2 = 46.62$, $df = 3$, $p = .000$) as 89.1% white, 86% Spanish or Hispanic, 81.3% Black, and 87.8% other races report having a spouse accompany them on overseas tours of duty.

Formal Social Support Trends

Need for formal social support services is highly related to *use* of professional support services ($r = .7650$, $p = .000$). The only other significant relationship found was *need* for or *use* of formal social support services was with *level of stress*. *Stress* was weakly but significantly related to *need* ($r = .1391$, $p = .000$) and to *use* ($r = .1419$, $p = .000$) of formal support services.

Implications of the Bivariate Results

A correlation coefficient matrix of all of the variables in the study is presented in Table 3.6. All qualitative variables are coded as dichotomous as noted in the table. Three

levels of probability are noted as well. Bivariate relationships of particular interest to consider during the regression model specification phase of analysis are those that involve stress. Stress was the only variable found to be at least weakly related to both dependent and independent variables in this study. Specifically, stress is weakly but significantly related to four predictor variables and to both outcome variables as noted previously. Consequently, the variable stress should be included in all models that contain any of the following independent variables: marital status (married & stress : $r_{pb} = .1917, p = .000$); satisfaction with community support (commsup & stress : $r = -.1862, p = .000$); satisfaction with marital tie (sprltn & stress: $r = -.0797, p = .000$) number of hours of volunteerism (volnter & stress: $r = .0651, p = .000$) to address the potential of stress based spurious findings since these variables are weakly correlated to outcome variables via stress. For consistency sake, stress was included in all models for structural comparison.

The ordinary least squares (OLS) regression model planned for the primary analysis plan of this study depends upon certain assumptions primarily about the error terms. Specifically, OLS regression model is contingent upon the assumption that (1) the mean of error term is equal to zero; (2) error terms are not associated with one another; (3) variability of error terms are unrelated to independent variables in the study; and (4) the error terms themselves are unrelated to the independent variables (Schroeder, Sjoquist, & Stephan, 1986). Although it is likely that most variables of interest in the social sciences are interrelated, the degree to which variables are related can result in variance inflation (Fox, 1991) thereby increasing the standard error of regression coefficients yielding imprecise estimation of beta coefficients (β s).

Collinearity occurs when two independent variables employed together in a regression

model are related (Schroeder, Sjoquist, & Stephan, 1986). Consequently, whenever one detects strong relationships between or among independent variables, collinearity diagnostics must be conducted and adequate steps taken to minimize the effects of collinearity (Fox, 1991). Collinearity diagnostic techniques include (1) examining coefficient variance inflation to determine the degree of collinearity, or (2) focusing on high bivariate and multivariate correlations of independent variables. Once collinearity is determined to be problematic, one can (1) respecify the model by combining like constructs (2) delete a variable from the model that appears most troublesome, or (3) accept a small bias in the estimation coefficients to gain a marked reduction in coefficient sampling variance (Fox, 1991).

Bivariate findings that generate some concern for collinearity include: (1) Age and the number of years one has served in the military ($r = .8774$, $p = .0000$), (2) Education and grade of pay ($r = .8279$, $p = .0000$), and (3) age and grade of pay ($r = .6648$, $p = .0000$). I addressed this problem by conducting collinearity diagnostic tests to examine the variance inflation factors (VIF) of independent variables specified for each regression model. All VIF have values of less than 10 with the largest VIF found to be less than 7 and tolerance limits greatly in excess of .01, a criterion widely employed to assess multicollinearity (Neter, Wasserman, & Kutner, 1989, pp. 409-411). Examination of all variable eigenvalues and corresponding decomposition of regression variance for variables in all models also suggests that dependency observed in the bivariate analysis is not adversely affecting estimates of the beta coefficients (SPSS for Windows: Base System User's Guide Release 6.0, 1993, pp. 355-357.)

Table 3.6 Zero-order Correlations of Predictor and Outcome Variables for all Regression Models

	2	3	4	5	6	7	8	9
1. Age	.05***	.12***	.50***	.66***	.12*	.39***	.88***	-.03***
2. Availability of spouse	1.00	.05***	.09***	.09***	.00	.39***	.04***	.00
3. Community satisfaction (4 = very)	.05***	1.00	.13***	.16***	.03***	.04***	.10***	-.07***
4. Education	.09***	.13***	1.00	.83***	.08***	.18***	.31***	-.02***
5. Grade of pay	.09***	.16***	.83***	1.00	.05***	.27***	.52***	-.06***
6. N hours of volunteerism	.00	.03***	.07***	.05***	1.00	.07***	.12***	.06***
7. Married (0 = n, 1 = y)	.39***	.04***	.18***	.27***	.07***	1.00	.42***	.03***
8. N of years in the military	.04***	.10***	.31***	.52***	.12***	.42***	1.00	-.04***
9. Need for formal support	.00	-.07***	-.02***	-.06***	.06***	.03***	-.04***	1.00
10. Black origin (0 = n, 1 = y)	-.07***	-.03***	-.07***	-.08***	.02***	-.05***	.04***	.04***
11. Other race origin (0 = n, 1 = y)	-.00	-.03***	-.00	-.02***	.02***	-.01**	-.00	.06***
12. Sanish or Hispanic origin (1 = y)	-.01	-.00	-.04***	-.05***	.01	-.01	-.02***	.04***
13. White origin (0 = n, 1 = y)	.06***	.04***	.07***	.10***	-.03***	.05***	-.02***	-.08***
14. Gender (0 = female, 1 = male)	.01	.02***	.05***	.10***	.03***	.11***	.16***	-.02***
15. Marital tie satisfaction (4 = very)	.13***	.10***	.05***	.05***	.02**	.09***	-.02***	-.06***
16. Job relocation stress (4 = very)	.02	-.19***	.07***	.07***	.07***	.19***	.12***	.14***
17. Use of formal support	.00	-.06***	.00	-.03***	.08***	.04***	-.01**	.77***
18. Volunteerism (0 = n, 1 = y)	.03**	.04***	.07***	.05***	.71***	.07***	.09***	.06***
	2	3	4	5	6	7	8	9

* $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$.

Table 3.6 Zero-order Correlations of Predictor and Outcome Variables for all Regression Models (continued)

	10	11	12	13	14	15	16	17	18
1. Age	.01**	.00	-.03***	.00	.14***	.01	.11***	-.01	.09***
2. Availability of spouse	-.07***	-.00	-.01	.06***	.01	.13***	.02	.00	.03**
3. Community satisfaction (4= V)	-.03***	-.03***	-.00	.04***	.02***	.10***	-.19***	-.06***	.04***
4. Education	-.07***	-.00	-.04***	.07***	.05***	.05***	.07***	.00	.07***
5. Grade of pay	-.08***	-.02***	-.05***	.10***	.10***	.05***	.07***	-.03***	.05***
6. N hours of volunteerism	.02***	.02***	.01	-.03***	.03***	.02**	.07***	.08***	.71***
7. Married (0= n, 1= y)	-.05***	-.01**	-.01	.05***	.11***	.09***	.19***	.04***	.07***
8. N of years in the military	.04***	-.00	-.02***	-.02***	.16***	-.02***	.12***	-.01**	.09***
9. Need for formal support	.04***	.06***	.04***	-.08***	-.02***	-.06***	.14***	.77***	.06***
10. Black origin (0= n, 1= y)	1.00	-.08***	-.08***	-.68***	-.08***	-.07***	-.08***	.02***	.01***
11. Other race origin (0= n, 1= y)	-.08***	1.00	-.05***	-.46***	-.02***	-.00	.02**	.04***	.02***
12. Spanish/Hispanic (0= n, 1= y)	-.08***	-.05***	1.00	-.43***	.01	.00	.01	.03***	.01
13. White origin (0= n, 1= y)	-.68***	-.46***	-.43***	1.00	.07***	.05***	.05***	-.05***	-.03***
14. Gender (0 = female, 1= male)	-.08***	-.02***	.01	.07***	1.0	.04***	-.00	-.01*	-.01
15. Marital satisfaction (4= very)	-.07***	-.00	.00	.05***	.04***	1.00	-.08***	-.04***	.02**
16. Job relocation stress (4= very)	-.08***	.02**	.01	.05***	-.00	-.08***	1.00	.14***	.05***
17. Use of formal support	.02***	.04***	.03***	-.05***	-.01*	-.04***	.14***	1.00	.08***
18. Volunteerism (0= n, 1= y)	.01***	.02***	.01	-.03***	-.01	.02**	.05***	.08***	1.00
	10	11	12	13	14	15	16	17	18

* $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$.

CHAPTER 4

INFORMAL SUPPORT PREDICTORS OF THE NEED FOR FORMAL SOCIAL SUPPORT SERVICES

Chapter 3 presented a descriptive picture of the military members who responded to an anonymous mail survey querying the need for and satisfaction with professional support services used. This chapter addresses the second goal of this study: to examine the relationship between primary (spousal) and secondary (community) informal support and the need for formal support. Questions about the relationships between aspects of marital and community ties and the need for formal support are tested. The specific questions are: When controlling for demographic characteristics, and the level of stress, how are the following aspects of informal support related to the need for formal social support:

- (1) Presence of a marital relationship
- (2) Satisfaction with one's marital relationship
- (3) Physical availability of one's spouse
- (4) Presence of a community relationship through volunteerism
- (5) Satisfaction with one's community support

Social integration theory suggests that people who are invested in close personal relationships, who engage in social intercourse through community volunteerism, or both, likely differ from their counterparts concerning the need for professional support services and help-seeking behavior. Perhaps those that enjoy greater degrees of social embeddedness may not need formal support services compared to those more socially isolated (Fox, 1984; Leaf, Livingston, Tischler, Weissman, Holzer & Myers, 1985; Horwitz, 1987). Social integration

theory is applied to investigate two informal sources of support: spousal and community support. The presence of, or the degree of commitment to, and the satisfaction with each relationship is examined as predictors of need for formal social support. This theory predicts findings in the opposite direction compared to complementary theory applied in Chapter 5.

Hierarchical Ordinary Least Squares (OLS) regression analysis is an appropriate tool to analyze the hypotheses in this study largely because one can control the assemblage of variable sets and the sequence entry of predictors and controls. One is able to examine the unique contribution of a variable or set of variables of interest. The hierarchical procedure determines the R^2 and partial regression coefficients at each step of the analysis permitting the examination of structural properties of variables of interest (Cohen & Cohen, 1983). Also noteworthy is that this procedure controls for confounding influences of variables in a sequence prescribed by the model. All regression procedures in this study began with regressing the outcome variable on a series of independent variables in steps determined by the conceptual framework. The first step in the regression was to enter all demographic characteristics including age, sex, race, education, pay grade, and the number of years in military service, here after termed the "demographic set." Variables in the demographic set were entered simultaneously as step 1. The level of stress one attributed to relocation to the current assignment of duty was entered as step 2 in all regressions because of the potential of confounding influence identified through bivariate analysis.

Finally, for all models presented in both Chapters 4 and 5, each informal support predictor was entered separately as the last step. The change in the proportion of variance attributable to the predictor of interest was identifiable. The adjusted multiple squared

correlation coefficient (R^2_{Adj}) of each full model and the corresponding significance test statistic is reported for each model. Also, a summary table of all models appears at the end of the chapter. The models are primarily differentiated by the informal predictor identified last in each table presented in Chapters 4 and 5. The change in R^2 attributed to the addition of each predictor for each model together with the F statistic and associated probability is also listed. Estimated beta coefficients, corresponding standard errors and probability levels are also noted for each variable in all the models. The empirical formulation for each model is constructed in Appendix D. Interaction terms are identified by the asterisk that connotes the product of the corresponding predictor variables. The balance of each chapter investigates each model in detail and the discussion of findings is situated at the end of Chapters 4 and 5.

Presence of Marital Relationship

The mere presence of a spouse is postulated as a potential resource that is unavailable to those not invested in a similarly intimate relationship (Eaton, 1978). Gove, Hughes and Style (1983) found that the number one predictor of mental health and physical well-being was marital status primarily due to social support that is exchanged between partners (Kessler & Essex, 1982). In fact, the strongest, most parsimonious measure of social support is the presence of an intimate and confiding relationship (Cohen & Wills, 1985; Kessler & McLeod, 1985; House, Umberson, & Landis, 1988). Social integration theory supports the expectation that military members with spousal support are less likely to need formal support services compared to those military members who are not married. This is because the

presence of a marital relationship somehow diminishes the detrimental aspects of a stressful military lifestyle.

Please recall hypothesis 1.1: Controlling for demographic variables, respondents who are married will report need for fewer formal social support services compared to unmarried respondents.

The multiple regression analysis in which need for formal support was regressed onto the demographic variables, stress and marital status are specified in the equation reported in Table 4.1 and yielded an R^2_{Adj} of .0405. The model was statistically significant ($F = 146$, $df = 10$, $p = .0000$). That is, 4.05% of the variance in the need for formal support services could be accounted for by the linear combination of these predictors. The unique proportion of variance in the outcome accounted for by marital status, though slight, yielded a change in R^2 of statistical significance ($R^2_{change} = .002$, $F_{change} = 71.81$, $p = .0000$).

However, contrary to social integration theory, married respondents reported more need for formal support than unmarried members. Controlling for the demographic set of variables and the level of stress, marital status was statistically significant and positively related to the need for formal social support services in this sample ($b = 1.32$, $t = 8.474$, $p = .0000$). Specifically, married military members reported 1.32 more needs for formal support compared to unmarried members. These findings are more consistent with expectations of complementary theory.

4.1 Hierarchical Regression of the Need for Formal Support on Control Variables and Marital Status for the Entire Sample

Variables in the Model	Step 1 b (SE b)	Step 2 b (SE b)	Step 3 b (SE b)	Beta (SE Beta)
Number of years military service	-.40*** (.07)	-.52*** (.07)	-.60*** (.07)	-.10 (.01)
Other race/ethnic origin	3.26*** (.29)	3.19*** (.29)	3.23*** (.29)	.06 (.01)
Spanish or Hispanic origin	2.50*** (.32)	2.48*** (.32)	2.47*** (.32)	.04 (.01)
Black origin	1.95*** (.21)	2.49*** (.21)	2.56*** (.21)	.07 (.01)
Gender (Female = 0)	-.13 (.17)	-.00 (.17)	-.12 (.17)	-.00 (.01)
Education	.45*** (.06)	.39*** (.06)	.38*** (.06)	.06 (.01)
Grade of Pay	-.43*** (.04)	-.41*** (.04)	-.41*** (.04)	-.12 (.01)
Age	.08*** (.02)	.08*** (.02)	.08*** (.02)	.05 (.01)
Stress of geographical relo (Very Stressful = 4)	—	1.97*** (.07)	1.87*** (.07)	.15 (.01)
Marital Status (Not married = 0)	—	—	1.32*** (.16)	.05 (.01)
Full Model				
R_{Adj}	.0155	.0385	.0405	
F	68.69	153.93	146.00	
df	8	9	10	
p	.0000	.0000	.0000	
Partial Model				
R_{change}^2	.0158	.0230	.0020	* $p \leq .05$, 2-tailed
F_{change}	68.69	822.76	71.81	** $p \leq .01$, 2-tailed
p	.0000	.0000	.0000	*** $p \leq .001$, 2-tailed

N = 34,348

Satisfaction with Marital Relationship

Perceptions of emotional social support are directly associated with and frequently buffer damaging psychological impacts of major life events and constant strains (Antonucci & Israel, 1986; Wethington & Kessler, 1986; Vaux & Athanassopoulou, 1987; for review of this topic see Thoits, 1995). When an individual is confronted with a stressor(s), perceptions of the adequacy of supportive relationships, not simply the availability of such relationships, predicted symptom manifestation (Henderson, Byrne & Duncun-Jones, 1981). Those typically engaged in dissatisfying social relationships were at greatest risk for symptom manifestation. Consequently, although presence of a spouse may be a strong indication of social support, satisfaction with the marital relationship likely reflects how supportive the marital relationship is. Those satisfied with their marital relationships likely derive more supportive benefit compare to their counterparts, particularly during times of increased stress. Therefore, one would expect that those military members invested in a satisfying spousal or community relationship will have less need for formal support services than those whose relationships are not satisfying.

Please recall hypothesis 1.2 Controlling for demographics, those more satisfied with their marital relationship will report need for fewer formal social support services compared to those less satisfied with their marital relationships.

Two models were built upon this premise and tested by way of hierarchical regression. Satisfaction with one's marital relationship is examined first, then the physical availability of one's spouse. The first model is specified by the variable sequence presented in

Table 4.2 that yielded a statistically significant F value of 141.34 ($df = 9$, $p = .0000$) and an R^2_{Adj} of .0398. That is, the full model that included the degree of satisfaction one had with one's marital relationship, accounted for 3.98% of the variance in the need for formal support services. The change in R^2 when satisfaction with one's marital relationship was entered as block three in the hierarchical regression was small but statistically significant ($R^2_{change} = .0011$, $F_{change} = 38.99$, $p = .0000$).

Consistent with social integration theory, the satisfaction level with one's marital relationship was weakly but significantly related to need for formal support ($b = -.25$, $t = -6.244$, $p = .0000$) when the demographic set of variables and level of stress were statistically controlled. That is, for every level increase in marital satisfaction there is a 25% decrease in the number of needs one reported for formal support. Consequently, those more satisfied with their marital relationship reported fewer needs for formal support compared to their less satisfied counterparts.

Availability of Spouse

One specific stressor common to all military personnel is geographic relocation, a topic more thoroughly discussed in Chapter 1. Social integration theory holds that married military members accompanied by their spouses when geographically relocated will need fewer formal support services compared to those unaccompanied by their spouses. This is due to protective benefits of marital support unavailable to unaccompanied members. The physical availability of one's spouse is more advantageous compared to the absence of one's marital partner. If it is true that the marital relationship is typically one's chief primary source of social support, then decreased availability of one's spouse would likely increase one's need for formal social support services, according to social integration theory.

4.2 Hierarchical Regression of the Need for Formal Support on Control Variables and Satisfaction with One's Marital Relationship among Married Respondents

Variables in the Model	Step 1 b (SE b)	Step 2 b (SE b)	Step 3 b (SE b)	Beta (SE Beta)
Number of years military service	-.40*** (.07)	-.52*** (.07)	-.57*** (.07)	-.09 (.01)
Other race/ethnic origin	3.27*** (.30)	3.20*** (.29)	3.22*** (.29)	.06 (.01)
Spanish or Hispanic origin	2.50*** (.32)	2.48*** (.32)	2.48*** (.32)	.04 (.01)
Black origin	1.97*** (.22)	2.50*** (.21)	2.58*** (.21)	.07 (.01)
Gender (Female = 0)	-.13 (.17)	-.00 (.17)	-.11 (.17)	-.00 (.01)
Education	.45*** (.06)	.40*** (.06)	.39*** (.06)	.06 (.01)
Grade of Pay	-.43*** (.04)	-.41*** (.04)	-.42*** (.04)	-.12 (.01)
Age	.08*** (.02)	.08*** (.02)	.08*** (.02)	.05 (.01)
Stress of geographical relo (Very Stressful = 4)	—	1.97*** (.07)	1.92*** (.07)	.15 (.01)
Satisfaction with Marital tie (Very satisfied = 4)	—	—	-.25*** (.04)	-.04 (.01)
Full Model				
R^2_{Adj}	.0158	.0387	.0398	
F	68.97	152.54	141.34	
df	8	9	10	
p	.0000	.0000	.0000	
Partial Model				
R^2_{change}	.0160	.0229	.0011	* $p \leq .05$, 2-tailed
F_{change}	68.97	807.93	38.99	** $p \leq .01$, 2-tailed
p	.0000	.0000	.0000	*** $p \leq .000$, 2-tailed

N = 33,858

Please recall hypothesis 1.3: Controlling for demographics and the level of stress of overseas tour of duty and marital status, respondents who are married and accompanied by their spouse will report need for fewer formal support services compared to those married but unaccompanied by their spouse.

The availability of one's spouse on overseas assignments was also examined in relation to the need for formal support services. The regression model constructed to test this prospect is reported in Table 4.3 and accounted for 4.01% of the variance in the need for formal support ($R^2_{Adj} = .0401$, $F = 27.04$, $df = 10$, $p = .0000$). Although the full model predicts the need for formal support, the unique contribution of spousal availability did not produce a change in R^2 of statistical significance ($R^2_{change} = .0001$, $F_{change} = .84$, $p = .3581$, *ns*). The estimated regression coefficient for spouse availability was not statistically significant when the influences of the demographic set of variables and level of stress were partialled out ($b = .43$, $t = .919$, $p = .3581$). This result is inconsistent with social integration theory that would predict that spousal availability is significantly related to the need for fewer formal support services. Perhaps it is important to control for the influences of secondary informal support. Consequently, the next model addressed this prospect.

4.3 Hierarchical Regression of the Need for Formal Support on Control Variables and the Availability of One's Spouse, among Married, Overseas Rsepondents

Variables in the Model	Step 1 b (SE b)	Step 2 b (SE b)	Step 3 b (SE b)	Beta (SE Beta)
Numbers of years in military	-.75*** (.16)	-.78*** (.16)	-.78*** (.16)	-.11 (.02)
Spanish or Hispanic origin	2.87*** (.74)	3.02*** (.73)	3.02*** (.73)	.05 (.01)
Other race/ethnic origin	3.22*** (.64)	3.21*** (.64)	3.21*** (.64)	.06 (.01)
Gender (Female = 0)	.01 (.45)	.08 (.45)	.08 (.45)	.00 (.01)
Black origin	1.76*** (.49)	2.31*** (.48)	2.33*** (.48)	.06 (.01)
Education	.58*** (.14)	.52*** (.14)	.52*** (.14)	.08 (.02)
Grade of pay	-.42*** (.09)	-.39*** (.09)	-.40*** (.09)	-.11 (.02)
Age	.10* (.05)	.10* (.05)	.10* (.05)	.06 (.03)
Stress of geographic relo (Very Stressful = 4)	—	1.99*** (.17)	1.99*** (.17)	.15 (.01)
Availability of spouse (Not available = 0)	—	—	.43 (.47)	.01 (.01)
Full Model				
R^2_{Adj}	.0182	.0401	.0401	
F	15.46	29.95	27.04	
df	8	9	10	
p	.0000	.0000	.0000	
Partial Model				
R^2_{change}	.0195	.0220	.0001	* $p \leq .05$, 2-tailed
F_{change}	15.46	143.09	.84	** $p \leq .01$, 2-tailed
p	.0000	.0000	.3581 ns	*** $p \leq .001$, 2-tailed

N = 6,236

Availability of Spouse without Volunteerism Influence

Social integration theory suggested that the more socially integrated one is, the less likely one is to need formal social support. A review of literature suggests that married people tend to volunteer more than unmarried so it is important to consider this potential confounding influence. Bivariate analysis demonstrates a statistically significant, weak association between marital status and volunteerism ($r = .0705, p = .000$). Examination of a contingency table for marital status and volunteerism cross confirms a weak association ($V = .07, p = .00000$) that is statistically significant ($\chi^2 = 252.27, df = 1, p = .0000$) consequently, volunteerism is included to control for its influence on the outcome variable.

Please recall hypothesis 1.4: 1.4 Controlling for demographics, volunteerism, and level of stress of an overseas assignment, those married and unaccompanied on overseas military tours will report need for more formal social support services compared to those married and accompanied by their spouse.

The model in Table 4.4 addresses this prospect as the hierarchical regression proceeded as noted earlier except volunteerism was entered on step three to statistically control for its influence. The model that examines spouse availability controlling for volunteerism accounts for 4.72% ($R^2_{Adj} = .0472, F = 29.08, df = 11, p = .0000$) of the variance in the need for formal social support. The unique contribution of spouse availability to the need for formal support even when volunteerism was taken into consideration was not statistically significant ($R^2_{change} = .0001, F = .54, p = .4625, ns$). Contrary to expectation, even when influences of the demographic set of variables, level of stress and volunteerism

were statistically controlled, the relationship between the availability of one's spouse and the need for formal support services was not statistically significant ($b = .34$, $t = .735$, $p = .4625$). Since the unique contribution of satisfaction with one's marital relationship was both weakly and significantly related to the need for formal support as discussed previously, another regression model was constructed to control for this influence. However, when the need for formal support was regressed on spouse availability with the influences of the demographic set of variables, level of stress, and satisfaction with one's marital relationship statistically controlled, spouse availability was still not significantly related to the outcome variable ($b = .52$, $t = 1.042$, $p = .2975$ ns).

4.4 Hierarchical Regression of the Need for Formal Support on Control Variables (Including Volunteerism) and the Availability of One's Spouse, among Married, Overseas Respondents

Variables in the Model	Step 1 b (SE b)	Step 2 b (SE b)	Step 3 b (SE b)	Step 4 b (SE b)	Beta (SE B)
Numbers of years in military	-.74*** (.16)	-.78*** (.16)	-.81*** (.16)	-.81*** (.16)	-.12 (.02)
Spanish or Hispanic origin	2.87*** (.74)	3.02*** (.73)	2.98*** (.73)	2.99*** (.73)	.05 (.01)
Other race/ethnic origin	3.22*** (.64)	3.21*** (.64)	3.11*** (.63)	3.11*** (.63)	.06 (.01)
Gender (Female = 0)	.01 (.45)	.08 (.45)	.08 (.45)	.08 (.45)	.00 (.01)
Black origin	1.76*** (.49)	2.31*** (.48)	2.23*** (.48)	2.25*** (.48)	.06 (.01)
Education	.58*** (.14)	.52*** (.14)	.43*** (.14)	.43*** (.14)	.07 (.02)
Grade of pay	-.42*** (.09)	-.39*** (.09)	-.35*** (.09)	-.35*** (.09)	-.11 (.02)
Age	.10* (.05)	.10* (.05)	.09 (.05)	.09 (.05)	.06 (.03)
Stress of geographic relo (Very Stressful = 4)	—	1.99*** (.17)	1.95*** (.17)	1.95*** (.17)	.15 (.01)
Volunteerism (N=0, Y=1)	—	—	2.06*** (.30)	2.06*** (.30)	.09 (.01)
Availability of spouse (Not Available = 0)	—	—	—	.34 (.47)	.01 (.01)
Full Model					
R^2_{Adj}	.0182	.0401	.0473	.0472	
F	15.46	29.95	31.94	29.08	
df	8	9	10	11	
p	.0000	.0000	.0000	.0000	
Partial Model					
R^2_{change}	.0195	.0220	.0073	.0001	
F_{change}	15.46	143.09	47.77	.54	
p	.0000	.0000	.0000	.4625 ns	

N = 6,236

* $p \leq .05$; 2-tailed, ** $p \leq .01$; 2-tailed, *** $p \leq .001$ 2-tailed

Community Volunteerism

Participation in community service associations is another avenue explored to establish degree of embeddedness (Berkman & Syme, 1979, Lin, Simeone, Ensel, & Kuo, 1979; Fischer, 1982) and is viewed here as a potential secondary social support resource and dimension of social integration (Sandler & Barrera, 1984, Laireiter & Baumann, 1992). Social integration theory suggests that military members who volunteer in fraternal societies, work related associations, religion based organizations, community assistance or youth programs and alike (Babchuk and Booth, 1969) will have less need for formal social support services than their nonparticipating counterparts due to the likelihood that volunteers will possess comparatively more secondary informal sources of support.

Please recall hypothesis 1.5: Controlling for demographics, respondents who volunteer will report need for fewer formal social support services compared to those who do not volunteer.

The multiple regression analysis in which need for formal support was regressed onto the demographic variables, stress and community volunteerism as specified in Table 4.5 yielded an R^2_{Adj} of .0427 for a model that was statistically significant ($F=154$, $df=10$, $p = .0000$). That is, 4.27% of the variance in the need for formal support services could be accounted for by the linear combination of these 10 predictors. The unique proportion of variance in the outcome accounted for by volunteerism yielded a change in indicative of a weak but statistically significant association ($R^2_{change} = .0043$, $F = 152.64$, $df=10$, $p = .0000$).

4.5 Hierarchical Regression of the Need for Formal Support on Control Variables and Volunteerism for the Entire Sample

Variables in the Model	Step 1 b (SE b)	Step 2 b (SE b)	Step 3 b (SE b)	Beta (SE Beta)
Number of years in military	-.40*** (.04)	-.52*** (.07)	-.56*** (.07)	-.09 (.01)
Other race/ethnicity origin	3.25*** (.29)	3.18*** (.29)	3.12*** (.29)	.06 (.01)
Spanish or hispanic origin	2.49*** (.32)	2.47*** (.32)	2.43*** (.31)	.04 (.01)
Black origin	1.94*** (.21)	2.48*** (.21)	2.43*** (.21)	.06 (.01)
Gender (Female = 0)	-.13 (.17)	-.01 (.17)	.02 (.17)	.00 (.01)
Education	.46*** (.06)	.39*** (.06)	.32*** (.06)	.05 (.01)
Grade of pay	-.43*** (.04)	-.41*** (.04)	-.37*** (.04)	-.11 (.01)
Age	.08*** (.02)	.08*** (.02)	.08*** (.02)	.05 (.01)
Stress of geographic relo (Very Stressful = 4)		1.97*** (.07)	1.93*** (.07)	.15 (.01)
Volunteerism (N=0, Y=1)			1.56*** (.13)	.07 (.01)
Full Model				
R^2_{Adj}	.0155	.0385	.0427	
F	68.58	153.99	154.47	
df	8	9	10	
p	.0000	.0000	.0000	
Partial Model				
R^2_{change}	.0157	.0230	.0043	* $p \leq .05$, 2-tailed
F_{change}	68.58	824.16	152.6	** $p \leq .01$, 2-tailed
p	.0000	.0000	.0000	*** $p \leq .001$, 2-tailed

N = 34,397

Contrary to the hypothesis, when the demographic set of variables and stress were statistically controlled, the estimated beta coefficient for volunteerism was positively related to the need for formal social support services and was statistically significant ($b = 1.56$, $t = 12.35$, $p = .000$). Respondents who volunteered reported 1.56 more needs than those who did not volunteer.

Satisfaction with Community Support

While studies consistently replicate the finding that presence of an intimate relationship significantly decreases the impact of stressful life events on psychological outcomes (Cohen & Wills, 1985), others have reported findings to the contrary (for exception since 1985 see Ensel & Lin, 1991). One possible explanation for exception (Ensel & Lin, 1991) to this pattern may be based upon opinions of how supportive a relationship is perceived to be. As noted previously, when an individual is confronted with a stressor(s), perceptions of the adequacy of supportive relationships, not simply the availability of such relationships, predicted symptom manifestation (Henderson, Byrne & Duncun-Jones, 1981). Those typically engaged in dissatisfying social relationships were at greatest risk for symptom manifestation (Henderson, Byrne & Duncun-Jones, 1981). This concept can also be applied to evaluations of how supportive one perceives one's community is.

Please recall hypothesis 1.6: Controlling for demographics, those satisfied with the supportiveness of the community they live in will report need for fewer formal social support services compared to those less satisfied with community supportiveness.

Satisfaction with the support one receives from one's community was entered as the lone predictor in block three consistent with the model displayed in Table 4.6. An adjusted R^2 of .0437 ($F = 133.5$, $df = 10$, $p = .0000$) was found for the full model that accounted for 4.34% of the variance of need for formal support. The unique change in R^2 attributed to the degree of satisfaction with community is small but statistically significant ($R^2_{change} = .0020$, $F = 61.76$, $df = 10$, $p = .0000$). Controlling for the influences of the demographic set of variables, and level of stress, the estimated beta coefficient demonstrates a statistically significant negative relationship between satisfaction with community support and the need for formal support ($b = -.78$, $t = -7.859$, $p = .0000$). Consistent with social integration theory, support for the hypothesis is found. For each increasing level of satisfaction (each 1 unit) with community support, respondents report .78 fewer needs.

4.6 Hierarchical Regression of the Need for Formal Support on Control Variables and Satisfaction with Community Support for the Entire Sample

Variables in the Model	Step 1 b (SE b)	Step 2 b (SE b)	Step 3 b (SE b)	Beta (SE Beta)
Number of years in military	-.45*** (.07)	-.57*** (.07)	-.55*** (.07)	-.09 (.01)
Other race/ethnicity origin	3.78*** (.32)	3.69*** (.32)	3.64*** (.32)	.07 (.01)
Spanish or hispanic origin	2.50*** (.35)	2.49*** (.34)	2.41*** (.34)	.04 (.01)
Black origin	1.94*** (.24)	2.48*** (.24)	2.43*** (.24)	.06 (.01)
Gender (Female = 0)	-.34 (.18)	-.22 (.18)	-.23 (.18)	-.01 (.01)
Education	.46*** (.07)	.39*** (.07)	.40*** (.07)	.07 (.01)
Grade of pay	-.45*** (.04)	-.43*** (.04)	-.41*** (.04)	-.12 (.01)
Age	.11*** (.02)	.10*** (.02)	.10*** (.02)	.06 (.01)
Stress of geographic relo (Very Stressful = 4)	—	1.98*** (.07)	1.86*** (.08)	.15 (.01)
Satisfaction with community support (Very Satisfied = 4)	—	—	-.78*** (.10)	-.05 (.01)
Full Model				
R^2_{Adj}	.0177	.0417	.0437	
F	66.32	141.17	133.50	
df	8	9	10	
p	.0000	.0000	.0000	
Partial Model				
R^2_{change}	.0180	.0240	.0020	* $p \leq .05$, 2-tailed
F_{change}	66.32	726.75	61.76	** $p \leq .01$, 2-tailed
p	.0000	.0000	.0000	*** $p \leq .001$, 2-tailed

N = 29,011

Summary and Discussion of the Need for Formal Support

This chapter examined linkages of informal social support with formal support of active duty Air Force military members who responded to a mail survey during the spring and summer of 1993. It examined the outcome of the need for professional support services as predicted by aspects of primary and secondary informal social support relationships. The theoretical framework was drawn from social integration theory and primarily based upon the premise that the more integrated one is in one's social environment, the less likely one is to need formal social support. The two indicators of one's social integration in this study hypothesized to relate to the outcome were the presence of a primary and secondary informal relationship, termed spousal and community ties respectively. The satisfaction with these relationships and the physical availability of a marital partner were also included. Conceptual models that examined these predictors controlled for age, sex, race/ethnicity, education, pay grade, number of years in military service, and the level of stress associated with geographical relocation to the present duty assignment. The summary of results using the method of Hierarchical Ordinary Least Squares regression discussed previously are assembled in tables Table 4.7 and Table 4.8

Table 4.7 Multiple Regression Statistics of Models that Predict Need for Formal Support

Model and Variable of Interest	Full Model R^2_{Adj}	Std Error	F Stat.	df	p
4.1 Marital Status	.0405	11.64	146	10	.0000
4.2 Satisfaction with Spousal Tie	.0398	12.62	78	10	.0000
4.3 Spouse Availablility	.0401	11.69	27	10	.0000
4.4 Spouse Availability with Volunteerism Statistically Controlled	.0472	11.65	29	11	.0000
4.5 Volunteerism	.0427	11.62	154	10	.0000
4.6 Satisfaction with Community Support	.0437	11.40	133	10	.0000

All full models predicted the need for formal support at statistically significant levels (Table 4.7). When variable influences are statistically controlled within the models, the findings point to the significant influence of the presence of primary (marital) and secondary (community) ties as well as satisfaction with same concerning the need for professional support services (Table 4.8). However, the presence of key informal supports relate to this outcome in the opposite direction than expected.

This study replicates previous work that documented the importance of satisfaction with informal support relationships in other populations (Henderson, Byrne & Duncun-Jones, 1981; Laireiter & Baumann, 1992). Specifically, the current findings on satisfaction with one's marital and community ties foster the advance of educational programming aimed at enhancing social skills that target marital and community intercourse.

Table 4.8 Hierarchical Multiple Regression Statistics for Unique Contributions to Need for Formal Support

Model & Unique Predictor	<i>b</i>	R^2_{change}	<i>F</i> Statistic	<i>p</i>
4.1 Marital status	1.32***	.0020	71.81	.0000
4.2 Satisfaction with Spousal Tie	-.25***	.0011	38.99	.0000
4.3 Spouse Availability	.43	.0001	.84	.3581 <i>ns</i>
4.4 Spouse Availability with Volunteerism Controlled	.34	.0001	.54	.4625 <i>ns</i>
4.5 Volunteerism	1.56***	.0043	152.64	.0000
4.6 Community Support Satisfaction	-.78***	.0020	61.76	.0000

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

The bulk of literature regarding marital status and social support perpetuates the widely-held assumption that married people have greater levels of social support than do unmarried individuals. Lin, Dean and Ensel (1986) reported the highest level of social support was found among married participants. Ross and Mirowsky (1989), found marrieds' perceptions of support were scored as more adequate and that both married men and women reported greater numbers of confidants. A thorough review of this topic is presented by Turner and Marino (1994) consistent with this contention. Further, because studies of help-seeking patterns report markedly higher rates of help-seeking among divorcees (Fox, 1984) and those who never married (Link & Dohrenwend, 1980) the deduction is made in

literature that marrieds do not need as much formal support because they are more embedded in informal networks.

Contrary to the hypothesis, the presence of a marital relationship did not reduce one's reported need for formal support. In fact, married military members reported 1.32 more needs for formal support compared to unmarried members. Despite the likelihood that married respondents (who comprise 67.4 % of the sample) enjoy greater levels of informal social support compared to unmarried members, married members may have need for more specific types of formal support compared to unmarries. The unique nature of a military lifestyle likely accounts for this difference.

The realities of a military commitment affect both the member and spouse. Perhaps a brief review of military policy regarding marriage will clarify this issue. Historically, the military member was viewed as having only one primary purpose during a military service commitment, to defend and protect the constitution of the United States. Prior to 1942, a marital relationship was seen as a commitment that could compromise a member's military responsibilities. During peacetime, those who were married were prohibited from entering into the military (US. Army Chief of Staff, 1983) and those who married during their service commitment were not permitted to reenlist. Consequently, there was little formal social support provision by the military organization for military family members. It was only during World War II (1942), that policy changed to permit married members to remain in the service.

Substandard shelter and financial hardships for family members associated with member disability or death came to the attention of policy makers following the report of findings from the 1952 Elizabeth Wickenden's study (Bell & Iadeluca, 1987). This study marks a turning point in military family policy targeting management of military family need as an organizational responsibility. As the military moved toward an all voluntary force, recruitment and maintenance of military members required the organizational adoption of, and provision for, military family needs (Segal, 1989). This brief review of the emergence of families in the military culture provides some insight to a fundamental reality of the military organization. That is, while family needs are of increasing importance in the military organizational framework, ultimately, the family must accommodate the organizational demands placed upon the military member in rendering service. Consequently, the family is directly and indirectly affected by the member's military commitment.

Although the presence of a spousal tie is viewed as a source of support, one must consider the prospects that marital ties can be a source of stress as well (Eckenrode & Gore, 1981; Riley & Eckenrode, 1986). Stressful occupational events that occur for a military member may be experienced by a spouse as stress producing. Eckenrode and Gore (1981) found that 70 % of all stress producing events reported by the focal person were rated similarly stressful by other network members. Thomson and Vaux (1986) investigated 3 member family units, (mother, father and adolescent) finding that distress in one family member was associated with exogenous stressors experienced by other family members (stress transmission).

Today, married active duty Air Force members account for 68% of the total Air Force population and 58% of Air Force members have children and only 5.3% are single parents (HQ AFMPC/DPMYAP, April, 1994). Military members frequently relocate and incur abrupt deployment directives and overseas transfers. Long working hours, and ongoing risk of injury or death are also normative in the military community (Segal, 1989). Perhaps most relevant to this discussion is the cyclic experience of geographical relocation that typically results in separation from extended family and terminates community informal support networks. As military members experience ongoing relocation adjustment, need for formal social support is a necessary aspect of military life.

Consequently, the finding of greater need for formal support among those who are married is most reasonable in view of the culture specific socio-environmental demands of military life. Married members may have spouse related needs that demand certain types of expertise in the realm of spousal employment, foreign born spousal acculturation support, spousal education, counseling and guidance, or spousal disability support (Military Family Resource Center, 1993). Also married members tend to take on additional family responsibilities sometimes providing elderly or disabled family member care. Consequently, requests for emergency financial assistance and help in finding secondary employment are more likely to originate from married rather than unmarried households (Military Family Resource Center, 1993).

Consistent with this line of reason is the finding that contrary to social integration theory, the physical presence of a spouse for members overseas did not influence the need for

formal support. One would deduce that the physical presence of a marital partner neither perpetuates nor deters the need for formal support for members overseas. Apparently the need for formal support among married members remains probable whether or not a spouse is physically available to a member.

It is interesting to note that the majority of military members are married. Married members comprised 67.4% of this sample similar to the Air Force population at 69% (HQ AFMPC/DPMYAP, 1994). Also noteworthy is that most married respondents expressed some level of satisfaction with their marital tie as 65.1% were very satisfied, 26.1% were satisfied, 5.2% were dissatisfied and 3.5% were very dissatisfied. Consequently, 91.2% of married respondents are satisfied with their marital relationship despite the apparent greater need for formal support compared to unmarried members. Need for specific types of support due to the presence of children may account in part, for greater need of formal support among marrieds. Married members are more likely to have children compared to unmarried as 58% of active duty Air Force members have children and only 5.3% of active duty Air Force are single parents (HQ AFMPC/DPMYAP, April 1994). Consequently, a greater need for child care, school placement assistance, house hunting assistance, community health and dental referrals have been reported by married members (Military Family Resource Center, 1993).

Although marital status is widely employed in social support research as an indicator of informal support, the unexpected findings noted previously raise questions of measurement validity. Whether marital status and volunteerism are properly applied as measures of

informal support remain open to inquiry. It is possible that the findings of this study are artifacts of the way marital status and community volunteerism are operationalized in that they are each only one indicator of informal support.

Another possibility is that marital status in the military may mean something very different in the military compared to the civilian sector. Unusually high satisfaction ratings for married members suggest that perceptions of satisfaction with marital relationships or reporting opinions regarding same, are distinctly different in the military population compared to their civilian counterparts. It is possible that in the military culture, marital status connotes something different than informal support. Rather, marital status in the military may actually be an indicator of formal support.

Evidence of this prospect includes formalized aspects of military spouses. First, spouses historically termed "dependents" are projected for inclusion in the military community. Consequently, provisions are made by the military organization for spouses regarding food, shelter, medical care, and geographic relocation (just to name a few benefits). Secondly, spouses acquire status and power within the organization via the rank of their military partner. As a member's rank increases so does the position of the spouse accessing the spouse to benefits and resources consistent with the rank structure. Third, spouses are frequently called upon by the military command to provide formal support through volunteerism when paid formal support services are absent or inadequate to serve military community need. A potent example of this fact is that the spouse of a General

pioneered the institution of the Family Support Center established to address nonmedical formal support needs of military members and their families.

Consequently, the military organization redefines the concept of marital status incorporating it into the organizational structure as a formal element. The organization views a spouse as a member of the "dependent group" for whom services must be provided, and also as a member of an auxiliary pool from whom to seek service provision. Therefore the military organization alters the meaning of marital status by redefining the content of the marital relationship thereby prescribing marital status as a formal support.

Consistent with this prospect are findings of volunteerism and the need for formal support. Contrary to social integration theory, volunteers reported the need for 1.56 more formal support services than their counterparts. Little research has been conducted on those who volunteer and the need for formal support. This hypothesis was built upon the same premise as marital tie, that the more integrated one is in one's community the less need for formal support one is likely to experience. Fischer (1982) notes that those who invest through organizational participation tended to have "adequate support" and that those whose primary social context was organizational, were more likely to refer to co-members as friends. Fischer (1982, p.113) concluded that participation in formal organizations were "more often supplements to already active social lives" rather than a "replacements for a lost community".

The finding of greater need for formal social support among volunteers may be partially explained by heightened awareness related to volunteerism alone. It seems likely

that those who volunteer in the community to provide aid to others would not only become more aware of their own needs but also possess knowledge of the formal resources available to gain support compared to those who do not volunteer. There is some support for this view as those who provided formal support to others through on base volunteer affiliations, used Air Force Family Support Center services more than those who did not volunteer on base (Albano, 1995).

A counter argument could be made that volunteerism relates to greater formal support need due to the costs associated with helping others in need. Results of several studies suggests that caring for others can take a toll on the caregiver's physical and mental well-being (Aneshensel, Pearlin, & Schuler, 1993; Rook, 1992; Thoit, 1992). However, one might question the negative impact potential of relationships that are voluntary and thus more easily terminated than relationships built out of obligation (Thoits, 1995).

Parallel to the finding for satisfaction with one's marital relationship, satisfaction with one's community support was negatively associated with the need for formal support. Social integration theory predicted that satisfaction with primary and secondary informal support ties would be negatively related to the need for formal social support. These findings are consistent with other studies of evaluations of support (Barrera, 1981; Henderson, Byrne & Duncun-Jones, 1981; Antonucci & Israel, 1986; Wethington & Kessler, 1986; Vaux & Athanassopoulou, 1987). In particular, perceptions of emotional social support were found to be directly associated with and frequently buffered damaging psychological impacts of major life events and chronic strains (Antonucci & Israel, 1986; Wethington & Kessler,

1986; Vaux & Athanassopoulou, 1987; for review of this topic see Thoits, 1995).

Henderson, Byrne & Duncan-Jones (1981) concluded that when an individual is confronted with a stressor(s), perceptions of the adequacy of supportive relationships predicted symptom manifestation. Those typically engaged in dissatisfying social relationships were at greatest risk for symptom manifestation (Henderson, Byrne & Duncan-Jones, 1981). Barrera (1981) also found in his study of pregnant adolescents that satisfaction with support predicted neurotic symptoms finding satisfaction negatively associated with the number of neurotic symptoms.

Other Findings of Interest

Literature that addresses gender specific help-seeking behavior and the use of social support can be found in studies situated in the health arena. Studies of mortality and morbidity rates demonstrate gender specific patterns with 14 out of 15 leading causes of death positively related to males and morbidity rates positively related to females when controlling for illness and disease associated with reproduction. (U. S. Department of Health, Education, and, Welfare, 1975; Gove & Hughes, 1979). Women are consistently identified as patronizing formal health care services more often than men (Cleary, Mechanic & Greenly, 1982). Women prevalently patronize primary-care physicians for mental health needs more often than men (Leaf & Bruce, 1987) and avail themselves more often of outpatient mental health services compared to men who predominate inpatient psychiatric care settings (Taube & Barrett, 1985). However, some studies document marginal or no gender differences in psychological vulnerability (Holahan & Moos, 1982; Turner & Noh, 1983) or treatment rates

among those with psychiatric disorders living in the community (Fox, 1984; Leaf & Bruce, 1987). Despite the inclusion of gender in most of the social support research, empirical findings are inconsistent (Vaux, 1988).

Given this brief review of literature on gender differences in help-seeking, the findings in this study are particularly interesting in that the relationship between gender and the need for formal support ($r_{pb} = -.02$, $p = .000$) was found to be weakly related but statistically significant in the bivariate phase of analyses ($\chi^2 = 264.18$, $df = 117$, $p = .0000$). However, when analyzed via hierarchical regression with the influences of other demographic variables statistically controlled, the relationship between gender and the need for formal support was not statistically significant across all 6 models that predicted need for formal support (See Tables 4.1- 4.6). A similar finding manifested in the analysis of use of formal support discussed in the next chapter.

The bivariate finding may be explained by the influences of age and pay grade. Females were both younger (Levene's Test for Equality of Variances: $F = 86.476$, $p = .000$; Unequal Variances $t = 31.60$, $df = 14,610.40$, *two-tailed* $p = .000$) and of lower pay grades compared to males (Levene's Test for Equality of Variances: $F = 123.495$, $p = .000$; Unequal Variances $t = 22.57$, $df = 14,582.23$, *two-tailed* $p = .000$). Consistent with findings reported by other researchers (Turner & Marino, 1994, Vaux, 1985) both of these demographic characteristics are risk factors for formal support need.

The lack of gender specific differences in regard to the need for formal support found in this sample may be an artifact of the military culture that historically has been a male dominated culture. Females that enter military service may perceive pressure to behave in a

manner similar to their male counterparts curtailing their help seeking due to cultural emphasis on personal control, fitness and accountability (Dunivin, 1988). A counter argument could also be made that performance pressure promotes increased male self referral and service utilization in the military compared to the civilian sector because the military promotes the maintenance of health, fitness, and personal problem resolution.

CHAPTER 5

INFORMAL SUPPORT PREDICTORS OF FORMAL SUPPORT UTILIZATION

Chapter 4 examined the issue of one's need for formal support among active duty military personnel. It addressed spousal and community ties that were hypothesized to be related to the need for professional support services. It discussed the rationale for the application of Hierarchical Ordinary Least Squares method of regression as an appropriate statistical approach to analyze data pertaining to hypotheses for both Chapters 4 and 5. Also the inclusion of certain control variables in model specification was detailed.

This chapter addresses the actual use of professional social support by sample respondents. It investigates the hypothesized relationships of two key informal supports, namely the presence of a spousal or community tie, with the use of formal support services. The general question addressed by this chapter is whether the presence of primary and

secondary informal support relationships are associated with the utilization of professional support services. Specifically, when controlling for demographic characteristics (age, sex, race, education, pay grade, and the number of years of military service) and the level of stress related to the relocation to the present duty assignment, what is the relationship between the following informal supports and the use of professional support services:

- (1) Presence of a marital relationship
- (2) Physical availability of one's spouse
- (3) Presence of a community relationship through volunteerism

One aspect of help-seeking often overlooked in research is the embedded nature of each person within their respective social relationships and the influence embedded social support exerts upon help-seeking (Eraker et al, 1984; Thoits, 1982). If need is identified, the degree of social embeddedness may be related to use of professional support services (Antonucci and Depner, 1982) because social relationships often provide information about professional service availability as well as encouragement to seek help (Chappel, 1987; George, 1987). Complementary theory embraces the embedded nature of social interface and provides the theoretical framework within which to fashion models discussed in this chapter.

A central feature of complementary theory is the postulate that informal and formal support operate in conjunction with one another rather than to the exclusion of one another (Chappell & Guse, 1989). Family and friends are viewed as the primary providers of social support within the parameters of resource availability and capacity to provide help (Litwak,

1985). Also when the need of a focal person exceeds the resource availability or capacity of a network member to address same, informal members likely act as a conduit for formal support services (Antonucci and Depner, 1982; Litwin & Auslander, 1988; McKinlay, 1973; Salloway & Dillon, 1973).

A review of literature presented in Chapter 2 detailed the theoretical blueprint that guided the construction of the hypotheses tested in this chapter. Statistical analysis was conducted as discussed in Chapter 4 with each regression commencing with entry of the demographic set as step 1. Stress level associated with relocation to the current duty assignment was then added to control for confounding influences suggested in the bivariate analysis. Step 3 in the procedure is differentiated across models by the particular predictor entered last into the model which is the study variable of interest.

The adjusted multiple squared correlation coefficient (R^2_{Adj}) is reported for each model individually as well as is a summary table in Chapter 6. The change in R^2 attributed to the addition of each predictor for all models together with the F statistic and associated significance are listed in Tables 5.1, 5.2 and 5.3. The corresponding empirical formulation for each model is included in Appendix D. Estimated beta coefficients, corresponding standard errors and probability levels are also noted for each variable in all of the models. The balance of Chapter 5 examines each model in detail and discussion of findings as they relate to the literature is situated at the end of the chapter. Recall that the variable "use" of formal support is based upon the respondent's expressed "need" for formal support via the satisfaction question.

Presence of a Marital Relationship

Given the postulate of complementary theory that informal network members act as a conduit to formal support services, one would expect that married military members will likely utilize professional social support services more compared to unmarried counterparts. Spousal support is established in literature as the chief primary source of support for those who are married (Fischer, 82) and has been particularly researched among the elderly population (Brody, 1981; Litwak, 1985; Tennant & Barley, 1985). Whether or not marital status differentiates those who utilize formal support services has not been well researched in healthy, younger populations but is examined here consistent with complementary theory.

Please recall hypothesis 2.1: Controlling for demographics, married respondents will utilize more formal social support services compared to unmarried respondents. A model was built upon this premise and tested via hierarchical regression.

The full model is specified by variable sequence presented in Table 5.1 that yielded a statistically significant R^2 value of .0359 ($F = 128.82$, $df = 10$, $p = .0000$). That is, the full model that included one's marital status, accounted for 3.59% of the variance in the use of formal support services. The change in R^2 when one's marital status was entered as step three in the hierarchical regression was small but statistically significant ($R^2_{change} = .0018$, $F = 63.81$, $p = .0000$). The estimated beta coefficient for marital status was also significant when the influences of the demographic set of variables and level of stress were statistically controlled ($b = .92$, $t = 7.988$, $p = .0000$). Consequently, support was found for the

hypothesis that marital status does influence one's use of formal support within this sample.

Those married reported use of .92 more formal support services than their unmarried counterparts. Another regression model was tested because volunteerism was found to correlate slightly ($r_{pb} = .09$) but significantly (Levene's Test for Equality of Variances: $F = 59.744, p = .000$; Unequal Variances $t = 19.20, df = 50,864.03, two-tailed p = .000$) with use of formal support, and slightly ($r_{pb} = .07$) but significantly ($\chi^2 = 252.27, df = 1, p = .00000$) with marital status.

A hierarchical regression was conducted controlling for the demographic set of variables, stress and volunteerism to rule out the possibility of a spurious finding owing to volunteerism. The estimated beta coefficient for marital status was still significant and changed minimally from that which is reported in Table 5.1 ($b = .87, t = 7.988, p = .0000$).

Table 5.1 Hierarchical Regression of the Use of Formal Support on Control Variables and Marital Status for the Entire Sample

Variables in the Model	Step 1 b (SE b)	Step 2 b (SE b)	Step 3 b (SE b)	Beta (SE Beta)
Number of years in military	-.27*** (.05)	-.36*** (.05)	-.42*** (.05)	-.09 (.01)
Other race/ethnicity origin	1.79*** (.22)	1.64*** (.22)	1.67*** (.22)	.04 (.01)
Spanish or Hispanic origin	1.51*** (.24)	1.49*** (.23)	1.49*** (.23)	.03 (.01)
Black origin	.76*** (.16)	1.12*** (.16)	1.18*** (.16)	.04 (.01)
Gender (Female = 0)	.06 (.13)	.15 (.12)	.07 (.12)	.00 (.01)
Education	.48*** (.05)	.38*** (.05)	.38*** (.05)	.08 (.01)
Grade of pay	-.35*** (.03)	-.34*** (.03)	-.34*** (.03)	-.14 (.01)
Age	.07*** (.01)	.07*** (.01)	.07*** (.01)	.06 (.01)
Stress of geographic relo (Very Stressful = 4)		1.46*** (.05)	1.40*** (.05)	.15 (.01)
Marital status (Not Married = 0)			.92*** (.12)	.05 (.01)
Full Model				
R^2_{Adj}	.0108	.0341	.0359	
F	48.03	135.80	128.82	
df	8	9	10	
p	.0000	.0000	.0000	
Partial Model				
R^2_{change}	.0111	.0233	.0018	* $p \leq .05$, 2-tailed
F_{change}	48.03	828.72	63.81	** $p \leq .01$, 2-tailed
p	.0000	.0000	.0000	*** $p \leq .001$, 2-tailed

N = 34,348

Availability of Spouse

Complementary theory suggests that married military members accompanied by their spouses when geographically relocated may be more likely to use formal support services compared to those unaccompanied by their spouses. This prospect arises from literature on the elderly (Litwin & Auslander, 1988) and mentally ill (Horwitz, 1987) that suggests that physical interface with family and friends is necessary to effectively bridge those in need to a formal service provider to insure that care is received. If it is true that the marital relationship is typically one's chief primary source of social support, then perhaps decreased physical availability of one's spouse might decrease one's use of formal social support services.

Please recall hypothesis 2.2: Controlling for demographics, married respondents on overseas tours and accompanied by spouse will utilize more formal social support services compared to overseas members unaccompanied by their spouses.

The availability of one's spouse on overseas assignments was examined for the potential that physical availability may influence formal service usage of military members.

The regression model constructed to test this prospect is reported in Table 5.2 and accounted for 3.57% of the variance in the use of formal support ($R^2_{Adj} = .0357$, $F = 24.09$, $df = 10$, $p = .0000$). Although the full model predicts the use of formal support, the unique contribution of spousal availability did not produce a change in of statistical significance ($R^2_{change} = .0002$, $F = 1.08$, $p = .2992$, *ns*). The estimated beta coefficient for spouse availability after the influences of the demographic set of variables and stress level was statistically controlled was not significant ($b = .37$, $t = 1.038$, $p = .2992$, *ns*). Contrary to the hypothesis, spouse availability and the use of formal support was not statistically significant..

Table 5.2 Hierarchical Regression of the Use of Formal Support on Control Variables and Spouse Availability, among Married, Overseas Respondents

Variables in the Model	Step 1 b (SE b)	Step 2 b (SE b)	Step 3 b (SE b)	Beta (SE Beta)
Number of years in military	-.40*** (.12)	-.42*** (.12)	-.43*** (.12)	-.08 (.01)
Other race/ethnicity origin	1.02* (.48)	1.00* (.48)	1.01* (.48)	.03 (.01)
Spanish or Hispanic origin	1.88*** (.24)	2.00*** (.23)	2.00*** (.23)	.05 (.01)
Gender (Female = 0)	-.17 (.34)	-.11 (.34)	-.11 (.34)	-.00 (.01)
Black origin	.99*** (.37)	1.41*** (.36)	1.43*** (.36)	.05 (.01)
Education	.63*** (.11)	.59*** (.11)	.59*** (.11)	.12 (.02)
Grade of pay	-.36*** (.07)	-.34*** (.07)	-.34*** (.07)	-.13 (.01)
Age	.06 (.04)	.07 (.04)	.07 (.04)	.05 (.03)
Stress of geographic relo (Very Stressful = 4)	—	1.53*** (.12)	1.53*** (.12)	.15 (.01)
Spouse availability (Not Available = 0)	—	—	.37 (.35)	.37 (.01)
Full Model				
R^2_{Adj}	.0127	.0357	.0357	
F	11.05	26.64	24.09	
df	8	9	10	
p	.0000	.0000	.0000	
Partial Model				
R^2_{change}	.0140	.0231	.0002	* $p \leq .05$, 2-tailed
F_{change}	11.05	149.28	1.08	** $p \leq .01$, 2-tailed
p	.0000	.0000	.2992 <i>ns</i>	*** $p \leq .001$, 2-tailed

N = 6,236

Community Volunteerism

Participation in community service associations is another avenue explored to establish degree of embeddedness (Berkman & Syme, 1979, Lin, Simeone, Ensel, & Kuo, 1979; Fischer, 1982) and is viewed here as a potential social support resource and dimension of social integration (Sandler & Barrera, 1984, Laireiter & Baumann, 1992). Social interface in the community especially in the capacity of rendering service to others may foster the use of formal support services as participants in voluntary activities are likely inclined to assist members of their own network. Since family members likely serve as a conduit to formal support, in times of need, network members of a shared volunteer activity may also perform in like fashion. Complementary theory suggests that those who volunteer are more likely to use professional social support services compared to those who do not volunteer as these secondary forms of informal support may serve in a similar conduit capacity.

Please recall hypothesis 2.3 Controlling for demographics, respondents who volunteer will utilize more formal social support services compared to those who do not volunteer.

The multiple regression analysis in which use of formal support was regressed onto the demographic variables, level of stress and community volunteerism as specified in Table 5.3 yielded an R^2_{Adj} of .0422 that was statistically significant ($F=152.63$, $df=10$, $p = .0000$). That is, 4.22% of the variance in the use of formal support services could be accounted for by the linear combination of these 10 predictors. The unique proportion of

variance in the outcome accounted for by volunteerism yielded a change indicative of a weak but statistically significant prediction ($R^2_{change} = .0081$, $F = 292.41$, $df = 10$, $p = .0000$). Consistent with complementary theory, controlling for the influences of the demographic set of variables and the level of stress, the estimated beta coefficient for the relationship between volunteerism and the use of formal social support was statistically significant ($b = 1.60$, $t = 17.10$, $p = .0000$). Military members who volunteer, reported use of 1.6 more formal support services than members who do not establish similar community ties.

Table 5.3 Hierarchical Regression of the Use of Formal Support on Control Variables and Volunteerism for the Entire Sample

Variables in the Model	Step 1 b (SE b)	Step 2 b (SE b)	Step 3 b (SE b)	Beta (SE Beta)
Number of years in military	-.27*** (.05)	-.36*** (.05)	-.40*** (.05)	-.09 (.01)
Other race/ethnicity origin	1.70*** (.22)	1.64*** (.22)	1.58*** (.21)	.04 (.01)
Spanish or Hispanic origin	1.50*** (.24)	1.49*** (.23)	1.45*** (.23)	.03 (.01)
Black origin	.72*** (.16)	1.11*** (.16)	1.07*** (.16)	.04 (.01)
Gender (Female = 0)	.06 (.13)	.15 (.12)	.18 (.12)	.01 (.01)
Education	.43*** (.05)	.38*** (.05)	.31*** (.05)	.07 (.01)
Grade of pay	-.35*** (.03)	-.34*** (.03)	-.30*** (.03)	-.12 (.01)
Age	.07*** (.02)	.07*** (.02)	.07*** (.02)	.06 (.01)
Stress of geographic relo (Very Stressful = 4)	—	1.46*** (.05)	1.43*** (.05)	.15 (.01)
Volunteerism (No = 0, Yes = 1)	—	—	1.60*** (.09)	.09 (.01)
Full Model				
R^2_{Adj}	.0108	.0341	.0422	
F	48.04	135.95	152.63	
df	8	9	10	
p	.0000	.0000	.0000	
Partial Model				
R^2_{change}	.0111	.0233	.0081	
F_{change}	48.04	829.90	292.41	
p	.0000	.0000	.0000	

* $p \leq .05$, 2-tailed

** $p \leq .01$, 2-tailed

*** $p \leq .001$, 2-tailed

N = 34,397

Summary and Discussion of the Use of Formal Support

This chapter assessed the linkages between informal social support relationships and the usage of formal support services of active duty military personnel as reported in a mail survey administered in 1993. It examined the connection between a primary and a secondary form of informal support relationship and the use of formal support services retrospectively for the year prior to the survey. The theoretical framework casts the presence of a spouse and the presence of a community tie through volunteerism as two factors hypothesized to be related to professional service utility consistent with complementary theory.

Summary tables of findings are presented in Tables 5.4 and 5.5. The adjusted multiple squared correlation coefficient (R^2_{Adj}) of each full model and the corresponding standard error and significance test statistics are reported in Table 5.4 and 5.5 for all models. The models are primarily differentiated by the informal predictor noted in the Variable of Interest column.

Table 5.4 Multiple Regression Statistics of Models that Predict the Use of Formal Support

Full Model & Variable of Interest	R^2_{Adj}	Std Error	F Statistic	df	p
5.1 Marital Status	.0359	8.63	129	10	.0000
5.2 Spouse Availability	.0357	8.79	24	10	.0000
5.3 Volunteerism	.0422	8.60	153	10	.0000

The change in R^2 attributed to the addition of each predictor for all models, together with the estimated beta coefficient, the F statistic and associated statistical significance are listed in Table 5.5.

Table 5.5 Hierarchical Multiple Regression Statistics of Unique Predictors of the Use of Formal Support

Model	Predictor	b	R^2_{change}	F Statistic	p
5.1	Marital Status	.92***	.0018	63.81	.0000
5.2	Spouse Availability	.37	.0002	1.08	.2992 <i>ns</i>
5.3	Volunteerism	1.60***	.0081	292.41	.0000
* $p \leq .05$		** $p \leq .01$		*** $p \leq .001$	

Consistent with expectations from the application of complementary theory, the results demonstrate that the utilization of professional social support services is directly related to the presence of primary and secondary forms of informal social support. Specifically, the presence of a marital partner or community tie through volunteerism, was positively related to the use of professional support services. Married respondents use .92 more formal support services than non married respondents. Also, those who volunteer reported 1.6 more use of formal support services than nonvolunteers.

The rigors of a military lifestyle that affects all members of a military family likely produce greater need for specific types of formal support not needed by the majority of unmarried members. Please refer to Chapter 4 for a thorough discussion of this point. Also

noteworthy is that in the military culture, military members are encouraged by the organization to seek out needed technical and professional support for self and family members as part of a member's personal responsibility and accountability. When one considers these points in light of organizational mandated medical and mental health standards for members, greater formal service patronage for married members compared to unmarried members is understandable.

Surprisingly, physical access to one's spouse for married members overseas was not related to the use of formal support services compared to those whose spouses accompanied them. Consistent with this finding is the work of Coe, Wolinsky Miller & Prendergast (1985), who found no difference in the use of medical services by elderly participants between those with and without family support networks in close physical proximity. Perhaps the answer to this apparent paradox can be found in the technological advances of telecommunication that promotes the maintenance of primary relationships across great geographical distances (Litwak, 1985) and may serve as a proxy to physical availability of one's spouse. Physical proximity appears an area that merits future consideration in the investigation of social support. Given the current state of technology for teleconference, computer interface, and video taped communication, measures of proximity of social support must be recast to accommodate these innovative alternatives to previous concepts of same.

Other Findings of Interest

The relationship between gender (0/1) and the continuous use for formal support was found to be weakly related ($r_{pb} = -.01$) but statistically significant in the bivariate phase of

analyses ($\chi^2=151.09$, $df=115$, $p=.0135$). However, when analyzed via hierarchical regression with the influences of the demographic set of variables and stress level statistically controlled, the relationship between gender and the use for formal support was not statistically significant across all 3 models (See Tables 5.1-5.3). As discussed in Chapter 4, this bivariate finding may be explained by the influences of age and pay grade which are not controlled in the bivariate analysis. Females were both younger and of lower pay grades compared to males (Statistics reported in Chapter 4). Consistent with finding reported by other researchers (Turner & Marino, 1994, Vaux, 1985) both of these demographic characteristics are risk factors for formal support usage. Potential explanations of this finding discussed in Chapter 4 focus on cultural expectations of personal control and fitness that are mandated for all military members in the armed services.

CHAPTER 6

CONCLUSIONS

The primary goal of this dissertation was to advance knowledge of how informal and formal social support relate. The three central aims outlined to achieve this goal were accomplished. First, this dissertation explored whether demographic characteristics were related to informal support from one's spouse and community tie and to formal support outcomes for inclusion in explanatory models as control variables. Demographic variables considered were age, education, gender, race, pay grade and the number of years of military service. Secondly, it examined the relationship between primary (spousal) and secondary

(community) informal support and one's need for formal professional support services.

Third, the relationship between primary (spousal) and secondary (community) informal support and the use of formal professional support services was examined. This final chapter summarizes the major findings, identifies the limitations of this research, suggests policy and practice implications of the findings, and offers direction for future research.

Summary of Major Findings

Descriptive Overview--

Sample respondents were relatively young, predominantly white, male, and of moderate socioeconomic status that closely estimated population demographic parameters. Roughly two thirds of respondents were younger than age 34 with a mean of 30.5. Males outnumbered females at a ratio of 4 to 1. Respondents tended to be white representing 79.3% of the sample, 10.8% Black, 4.5% Spanish or Hispanic and 5.3% other race or ethnicity. Forty percent of respondents had attended college but had yet to graduate at the bachelors level representing 20,551 members and less than 1% had yet to complete high school with a diploma or GED. The mean pay grade fell within the E6 pay grade suggesting that the average respondent was roughly equivalent to Technical Sergeant in rank. More than three quarters (78.3%) of the respondents were of the enlisted rank (N = 39,104) and 21.7% were officers (N = 10,869). The mean number of years of active military service was 8.

Married members comprised 67.4% of the sample. Most respondents expressed some level of satisfaction with their marital tie as 65.1% were very satisfied, 26.1% were satisfied, 5.2% were dissatisfied and 3.5% were very dissatisfied. Respondents who were married and overseas comprised 16.6% of the sample ($N = 8,430$) and of these respondents, 81.6% were accompanied by their spouse while 18.4% did not have their spouse available for social support.

The sample was almost evenly divided with respect to a community tie through volunteerism with 50.4% volunteering. The majority of volunteers contribute 2 or less hours each week to some organization either on or off of the base to which they were assigned representing 34.8% of the total sample. Satisfaction levels with community support were more favorable than not with 79.1% satisfied or very satisfied and 29.9% dissatisfied or very dissatisfied. Roughly two thirds of the sample range between no expressed need for formal support over the 12 previous months and the mean of 10.38 needs. The mean number of professional support services used over the same time period was 8.1.

Bivariate Findings of Interest--

Stress was the only variable found to be at least weakly though significantly related to both of the dependent variables and a few of the independent variables in this study. The following bivariate relationships of interest between stress and predictors include: marital status (married & stress: $r = .1917$, $p = .000$); satisfaction with community support (commsup & stress: $r = -.1862$, $p = .000$); satisfaction with marital tie (sprltn & stress: $r = -.0797$, $p = .000$) number of hours of volunteerism (volnter & stress: $r = .0651$,

$p = .000$) .Consequently, stress was built into all of the models.

The relationship between gender and both outcome variables was found to be statistically significant in the bivariate phase of analyses. However, when analyzed via hierarchical regression with the influences of other demographic variables statistically controlled, the relationship between gender and these outcomes was no longer statistically significant across all study models. Bivariate findings likely resulted from the influences of age and pay grade (Turner & Marino, 1994, Vaux, 1985) not being controlled.

Multivariate Findings--

Regardless of the degree of informal tie, primary (marital) or secondary (community volunteerism), informal support was positively related to both the need for, and the use of, formal support services. Also positively related to the need for formal support was the number of hours one volunteered in one's community. Conversely, satisfaction with either marital or community informal support predicted less need for formal support. The physical availability of one's marital partner was not related to the need for, nor the use of formal support.

One plausible explanation that reconciles the findings from Chapters 4 and 5 is contained within Litwak's (1985) perspective of complementary roles of informal and formal support. Unexpected findings of greater formal support needs among married military members who are likely more socially embedded than their unmarried counterparts, suggests that functional content rather than the existence or adequacy of social support is the issue. Specifically, the "degree to which [social relationships] involve flows of affect or emotional

concern, instrumental or tangible aid, information, and the like" (House, 1987, p. 137) rather than merely the presence of, or satisfaction with social support is paramount in this study. Since the vast majority of married respondents are satisfied with their marital relationship (91.2%) and satisfaction with support has been closely correlated with adequacy of support (Henderson, Byrne & Duncan-Jones, 1981; Laireiter & Baumann, 1992), the need for formal support appears to be more indicative of the expertise required to meet the need, rather than quantity or quality of same.

Formal organizations provide services that are based upon technical expertise drawn from science and technology typically unavailable in the informal network. The origins of matching task to the level of skill and technical knowledge in social science literature is easily traced to Weber (1947) from whom Litwak (1985) draws his rationale for the mechanisms of formal and informal support interface. Complementary roles of informal and formal support is based upon the "theory of shared functions" (Litwak & Figueira, 1970) that purports that most goals are comprised of components that require both specialized training and continual contact with someone possessing general everyday experience (Litwak, 1985). Consequently despite the amount of people in one's network possessing everyday experience, specialized training may be required to most effectively achieve goals.

Despite the likelihood of more informal network ties for married compared to unmarried respondents, married members have needs that distinguish them from unmarried military members. Married military members face all the same challenges of a military lifestyle that confront unmarried members but are apt to need specific types of social support

more than unmarried members. These distinctions are particularly evident at the time of employment related geographic relocation (Bowen & Pittman, 1993) but tend to be ongoing occurrences in the military population.

A couple of typical events that could occur in the life of a military member can give this point meaning. (1) A married member is sent on a training exercise while her spouse remains behind in their base quarters. The spouse assumes the member's household responsibilities in the member's absence (primary informal support). While washing the bathroom tub, the spouse falls breaking his arm and a good friend drives him to the hospital (primary informal support) for medical attention (formal support). Likely the friend is not a physician of sufficient skill to medically attend to the injury. (2) A military member who married a foreign born Korean spouse is transferred from Korea to the United States. Upon his arrival, he recognizes that his spouse needs help in learning American language and customs (primary informal support). He arranges for an appointment (primary informal support) and escorts his spouse (primary informal support) to the Family Support Center. An agent at the Family Support Center enrolls the spouse in acculturation classes, refers her to the local college for language classes and to the local Korean Born Support Group for assistance (formal support). While it is possible that the Korean spouse may, in time, meet other Koreans to gain informal support, the spouses' needs are more efficiently and timely managed through formal support designed to address the issues at hand. Consequently, the division of labor based upon specialized knowledge allows for the expedient, efficient management of each event.

Married members often have spouse related needs that demand certain types of expertise in the realm of spousal employment, foreign born spousal acculturation support, spousal education, counseling and guidance, and/or spousal disability support (Military Family Resource Center, 1993). Married members are more likely to have children compared to unmarried members as 58% of active duty Air Force members have children and only 5.3% of active duty Air Force are single parents (HQ AFMPC/DPMYAP, April 1994). Consequently, a greater need for child care, school placement assistance, house hunting assistance, community health and dental referrals have been reported by married members (Military Family Resource Center, 1993). Also, because married members tend to take on greater family responsibilities, sometimes providing elderly or disabled family member care, financial assistance, and second jobs, requests for specific types of formal support services are more likely to come from married rather than unmarried households (Bowen & Pittman, 1993; Military Family Resource Center, 1993).

Therefore, married members are more likely to need technical support unavailable to them from informal network members. This is the crux of Litwak's (1985) description of how informal and formal support operate. Litwak posits that informal and formal support are both necessary sources of support to individuals serving task specific purposes. The findings of this study are consistent with this view in that married members not only needed 1.32 more formal support services compared to unmarried members ($b = 1.32$, $t = 8.474$, $p = .0000$), but also used .92 more formal support services than their unmarried counterparts ($b = .92$, $t = 7.988$, $p = .0000$).

Similarly, increased need for formal support among those who volunteer compared to those who do not ($b = 1.56$, $t = 12.35$, $p = .0000$) is better understood applying Litwak's (1985) theoretical framework. Specifically, volunteerism heightens awareness of specialized training required to address certain needs adequately. It seems likely that those who volunteer in the community not only become more aware of their own needs but also possess an understanding of the technical expertise necessary to effectively address certain needs compared to those who do not volunteer. There is some support for this view as those who provided formal support to others through on base volunteer affiliations, used Air Force Family Support Center services more than those who did not volunteer on base (Albano, 1995).

Parallel findings for satisfaction with one's marital relationship and satisfaction with one's community support that were negatively associated with the need for formal support are also consistent with Litwak's (1985) framework. Those dissatisfied with the support received to address everyday needs would need more adequate support likely turning to the formal arena for assistance. It appears reasonable that since perceptions of the adequacy of support were found to be directly associated with and frequently buffered damaging psychological impacts of major life events and chronic strains (Antonucci & Israel, 1986; Wethington & Kessler, 1986; Vaux & Athanassopoulou, 1987; for review of this topic see Thoits, 1995) and that adequacy and satisfaction measures are highly correlated (Laireiter & Baumann, 1992), satisfaction with informal support would predict less need for formal support.

Litwak's (1985) view of complementary roles of social support mechanics is consistent with this finding.

There is the possibility that operationalization of informal support via marital status and community volunteerism is insufficient to capture this conceptualization adequately, as only one indicator of primary and secondary support are employed in this study. Also along this line of thought is the prospect that an alternative explanation of the unexpected findings of this study may be that marital status may actually function as a formal support in the military community. This interpretation is another example of complementary interface between organization and spousal support. The military organization provides formal support to spouses of military members but also seeks voluntary support services from spouses in times of resource shortages. Though reported widely in social support literature as a reliable indicator of informal support, marital status may mean something different in the military population. Three characteristics of marital status in the military that suggest this prospect are: (1) spouses are formally incorporated into the military schema, (2) spouses share the socioeconomic status of their military partner and all the cultural benefits corresponding to same, (3) spouses comprise a voluntary resource bank often accessed by the organization to provide formal services limited or absent in the military community.

This prospect represents a marked departure from the way marital support is conceptualized presently in social support research design. Findings of increased formal support needs among married military members counter to expectation represents the major contribution of this study to linkages between informal and formal social support. It is

particularly relevant to the military research community as it supports the discussion of spousal role differences in the military setting compared to the civilian sector. This study targets a new direction in the conceptualization of spousal support as a potential formal element and the need for further inquiry into spousal support conceptualized as a formal element in certain populations.

The findings of this study have timely implications for human service policy makers presently confronted with shrinking fiscal appropriations for formal service delivery. Voluntary social support within formal organizational structures motivated by incentives other than financial gratuity presents an interesting alternative to paid formal service provision. Specifically, investing in technical training of volunteers embraced by an organization as an essential formal resource and given status and recognition within the organization may offer cost effective alternatives to contracting certain formal services.

Limitations of this Study

Response rates-

Perhaps the single most important methodological limitation of this study is the response rate for respondents. An anonymous mailed questionnaire was sent to 100,000 active duty Air Force military members with 50,867 instruments returned completed representing roughly 51% of those sampled. While this response rate is typical for mail surveys (Dillman, 1983) it limits generalization of the findings of this study as respondents may be markedly different in their views than nonrespondents. However, the combination of

the sampling strategy, the fact that this is a probability sample, and the mobile nature of the population studied promotes confidence one may have in the findings of this study.

Please recall the sampling strategy as follows: this disproportionate stratified random probability sample of active duty Air Force members was drawn from the total Air Force population assigned to 101 bases that had a Family Support Center located on base, with sample numbers and weightings based upon grade of pay and population size for each base with lower socioeconomic status of grades E1 to E3 oversampled due to typically low response rates. The respondents in the sample appear comparable to the greater Air Force population regarding six demographic characteristics included in this study (Comparisons are presented in the descriptive overview section).

Also a consideration is the mobile nature of this population. When members were selected for participation in the study, surveys were addressed to the selectee. Surveys were sent to each base with a list of the base selectees for inclusion in the study. The surveys were then distributed to the selectees through the base office mail system. If a selectee had already transferred or was sent on temporary duty (not scheduled to return for some time), surveys were returned unopened or were discarded. It is not possible to say how many surveys failed to reach the intended member. Future mail survey designs should consider this prospect when planning distribution of surveys. Perhaps the survey could be mailed to the member or identify an alternate/replacement to enhance response rates.

Effect size of the findings--

Emphasis in this study is placed upon the statistical significance of findings rather than effect size of the findings. This decision was made in keeping with conventional reporting in this area of research. The size of the sample is quite large and produces statistically significant findings for the vast majority of relationships examined. Cohen's (1988) recommended effect sizes were helpful in synthesizing bivariate analysis. However, regression findings were reported consistent with informal and formal support literature in keeping with convention of focusing on hypothesis testing. Historically, zero order correlations of social support and mental or physical health outcomes have been rather modest, rarely exceeding .4 in size. Once statistical control of potential confounding influences is introduced into the analysis of social support effects, weaker associations are usually produced. Consequently, over the last decade, social support researchers have applied methodology that better prevents against spurious findings by focusing on hypothesis-testing. Through hypothesis-testing a researcher may be more adequately able to address the questions of interest. Determining criterion of effect size with regard to social support research is, for the most part, not applicable to the questions of interest to most social support researchers, and is typically the purview of the experimental and clinical researcher focused upon intervention impact.

However, it is important to also note that the models employ variables that are expected to account for small portions of total variance in outcome. Absent from these models due to the lack of survey data are prime predictors of need or use of formal social

support. Example of such indicators are mental or physical health, well-being and alike, all of which historically produce markedly greater explained variance results than those reported in this study.

Instrument construction--

The instrument was organized to directly inquire about need for specific forms of social support. Respondents were then asked for each affirmative response to need for a formal support service, to then indicate their satisfaction level if services were sought. At no point were the respondents asked to directly report use of formal support services. Consequently, the design of the instrument is such that use is never directly measured. The researcher makes the reasonable inference of service use from the satisfaction level with services reported by the respondent. Conversely, the researcher makes the inference that if no satisfaction evaluation is rendered, then no services were used. One way to improve this instrument design is to construct questions that directly ask if services were used. One example of improving question #38 is as follows: "For each program or service listed: mark column if you used the service in the past 12 months" rather than the verbiage "if you were satisfied or dissatisfied with services you used" employed in this instrument. Separating satisfaction inquiry from service use allows an individual to clearly indicate if services were received. It is also important to query need separate from use to distinguish need and use.

Implications for Policy and Practice

Family Support Center (FSC) is the central agency that provides or coordinates most of the social support programs on Air Force bases. But the name is a potential barrier to those without family. It is reasonable to assume that military members who have no family might not identify the Family Support Center as an appropriate agency to address their formal support needs. This is particularly true for relatively new active duty members who are likely to be young, unschooled in the military culture and resource availability, and likely to have great need for adjustment and social intergration. Although, Family Support Centers offer numerous services and programs for the single, lone, military member, the name of the FSC does not adequately reflect the needs of all personnel. If formal social support is meant for all members, then policy makers should take into account the potential of two problems embodied in the name of this agency, (1)discrimination within program development that favors service members with family versus those without family members, and (2) the utilization obstacle conveyed by the meaning of the name of the agency itself.

Future Research Directions

Design of Research-- Hypotheses to consider for future study entail the confirmation of relationships found in this study in longitudinal research. Because the data employed in this study is cross-sectional, findings of this study are limited to generating hypotheses for future investigation. Questions of causality must be approached longitudinally to rule out historical and contextual influences. Londitudinal data is also more reliable in that data is

collected prospectively as events occur, rather than retrospectively relying upon respondents' memories of past events.

Conceptualizations-- Specific questions for consideration include: (1) Does marital status and volunteerism constitute valid indicators of informal support, or perhaps, formal social support? (2) If marital status and volunteerism are appropriate indicators of primary and secondary informal support, do they predict greater need for, and use of, formal support in this and other populations? Measures of proximity of support should expand conceptual frameworks to embrace new technological advances in the investigation of social support exchange. Specifically, the advent of user friendly computer programs has opened the door to social interface in ways that can incorporate elusive populations. The housebound, the elderly, the chronically ill and alike now have both informal and formal support availability unobtainable to most only 5 years ago. Also, the potential to present on-line social service referral and support abound. This is particularly relevant to a population with ready access to technological advances such as the military. Most military installations have on-line computer access with most work sites computer linked. Additionally, audiovisual support and computer resource centers are established through the Family Support Center, Educational and Career Counseling, and in some cases, Chaplains Service, base volunteer organizations like the Red Cross and Air Force Aid Association.

Instrument Construction-- All models in this study explain minimal variance in the need for, or use of, formal support. Future inquiry should include psychological functioning such as measures of distress or problem severity. Examples include measures of depression,

mental health diagnoses, types of medications currently or recently prescribed, alcohol consumption and illegal substance use, and alike. Inclusion of such indicators in model construction likely will improve the level of explained variance of model predictions.

Model Specification-- Analysis of the use of formal support should control for the need for formal social support to gain a clearer picture of the use of formal support services. This conceptualization and corresponding analytic procedures were not performed in this study. Consequently, the findings for use are clouded by the lack of measure of the need for formal support services. Inclusion of family composition such as the number of children and the presence of an exceptional family member (elderly, disabled or challenged family member) is also recommended. Interactions between stress and all predictors of interest should be examined in future inquiry as literature demonstrates that stress moderates social support influence. Examples include but are not limited to: (1) interaction between stress and marital status as the product predicts formal support, and (2) interaction between stress and volunteerism as the product predicts formal support.

Areas of Inquiry-- Future research should examine the types of need and service utilization that distinguish married from non married members. It would be informative to develop tailored profiles of specific services needed, used, and source of support provider chosen by married versus unmarried, especially differentiating among those with children or special family members. Such profiles would enhance current understanding about task provision interface thereby informing policy and program development.

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APPENDIX A
1993 AIR FORCE NEEDS ASSESSMENT SURVEY

AIR FORCE NEEDS ASSESSMENT SURVEY

162



"Supporting the mission Serving our people!"

- PLEASE TAKE A FEW MINUTES TO TELL US ABOUT YOUR NEEDS AND EXPERIENCES.
- WE WILL PAY YOU BACK WITH PROGRAMS THAT SERVE YOU BETTER!
- INSTRUCTIONS ARE SIMPLE:
 1. Base your answers on your own feelings and experiences.
 2. Use a standard No. 2 PENCIL.
 3. Completely darken the circle when you select your answer.
 4. Mark only one answer for each question unless instructed otherwise.
- THE SURVEY LOOKS LONGER THAN IT REALLY IS. YOU WILL NOT BE ANSWERING ALL THE QUESTIONS.

Your participation in the survey is completely voluntary and none of the information provided will be associated with you individually. Your survey will be treated as confidential and only group statistics will be reported.

YOUR BACKGROUND

1. Are you?

- ☐ Male
☐ Female

2. What is your current age?

Example:
If you are 31
you would
mark:

3	1
0	0
1	1
2	2

0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

3. What is the highest level of education you have completed?

- ☐ Less than high school, but no diploma or GED
☐ High school completed with diploma or GED
☐ Up to 2 years of college, but no degree
☐ Associate's degree
☐ Technical/vocational degree (RN, electrician, etc.)
☐ 3 or more years of college, but no degree
☐ College graduate
☐ Post graduate study or degree

4. What is your racial/ethnic background?

- ☐ White, not of Spanish/Hispanic origin
☐ Black, not of Spanish/Hispanic origin
☐ Spanish/Hispanic
☐ Asian/Pacific Islander
☐ American Indian/Aleut/Alaskan Native
☐ Other

5. What is your current marital status?

- ☐ Married to active duty military member
☐ Married to civilian
☐ Legally separated or filing for divorce
☐ Not married (Divorced, widowed, never married)

IF YOU ARE NOT MARRIED GO TO QUESTION 8.

6. How many years have you been married to your current spouse?

- ☐ Less than 1 year
☐ 1 to 3 years
☐ 4 to 6 years
☐ 7 to 10 years
☐ 11 to 15 years
☐ 16 to 20 years
☐ Over 20 years

7. Is this your first marriage?

- ☐ Yes
☐ No

8. How long have you been living on base or in the surrounding community? 163

- ☐ Less than 1 month
☐ 1-3 months
☐ 4-11 months
☐ 12-24 months
☐ 25-36 months
☐ More than 36 months

9. Where do you live now?

- ☐ On base in a dormitory
☐ On base in government housing
☐ On base in private rental
☐ Off base in government leased housing
☐ Off base (rent)
☐ Off base (own)
☐ Temporary quarters

10. How far do you live from base?

- ☐ I live on base
☐ Fewer than 15 minutes away
☐ 15 to 30 minutes away
☐ More than 30 minutes away

11. In the last 12 months, how many months have you found it difficult to pay your bills?

- ☐ Every month
☐ Nearly every month
☐ About half of the months
☐ One or two months
☐ None of the last 12 months

12. To which of the following organizations have you volunteered in the past 12 months? (MARK ALL THAT APPLY.)

- ☐ I did not volunteer
☐ Air Force Family Support Center (FSC)
☐ Chapel on base
☐ American Red Cross on base
☐ Other on-base services
☐ Off-base services

13. On the average, how many hours per week do you typically provide volunteer service?

- ☐ I do not volunteer
☐ Less than 1 hour
☐ 1-2 hours
☐ 3-4 hours
☐ 5-6 hours
☐ 7-10 hours
☐ 11 or more hours

14. Would any of the following increase your interest in volunteering? (MARK ALL THAT APPLY.)

- ☐ Receiving more information about organizations that need volunteers
☐ Free child care while volunteering
☐ Free transportation to and from your home to volunteer
☐ Receiving credit toward paid work experience
☐ I am not interested in volunteering/do not have time
☐ I am already volunteering as much as possible

YOUR JOB AND THE MILITARY

15. What is your current association with the Air Force?

- ☐ Active duty military member
☐ Spouse of active duty
☐ Both my spouse and I are active duty

16. Under normal circumstances, approximately how many HOURS PER WEEK do you work at your primary paying job? Write the numbers in the top boxes, then fill in the corresponding circles.

If not employed, enter "00" in the top boxes and darken this circle → ☐

0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

17. On the average, how many HOURS PER WEEK do you spend on a second paying job? Write the numbers in the top boxes, then fill in the corresponding circles.

If do not have a second job, enter "00" in the top boxes and darken this circle → ☐

0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

FOR QUESTIONS 18-21, PLEASE ANSWER AS FOLLOWS:

Military members, answer for YOUR MILITARY CAREER.

Civilian spouses of military members, answer for YOUR SPOUSE'S MILITARY CAREER.

18. What is your or your spouse's rank or pay grade?

- | | |
|--------------------------------------|------------------------------------|
| <input type="radio"/> E1 (AMN BASIC) | <input type="radio"/> 01 (2 LT) |
| <input type="radio"/> E2 (AMN) | <input type="radio"/> 02 (1 LT) |
| <input type="radio"/> E3 (AMN 1ST) | <input type="radio"/> 03 (CAPT) |
| <input type="radio"/> E4 (SGT) | <input type="radio"/> 04 (MAJ) |
| <input type="radio"/> E5 (SSGT) | <input type="radio"/> 05 (LTC) |
| <input type="radio"/> E6 (TSGT) | <input type="radio"/> 06 (COL) |
| <input type="radio"/> E7 (MSGT) | <input type="radio"/> 07-010 (GEN) |
| <input type="radio"/> E8 (SMSGT) | |
| <input type="radio"/> E9 (CMSGT) | |

19. At the present time, what are your or your spouse's military career plans? 164

- ☐ To stay in the Air Force until retirement
☐ To stay in the Air Force beyond present obligation; but not necessarily to retirement
☐ To leave the Air Force upon completion of present obligation
☐ Undecided

20. How much active duty military service have you or your spouse completed?

- | | |
|--|--|
| <input type="radio"/> Fewer than 12 months | <input type="radio"/> 7-8 years |
| <input type="radio"/> 1-2 years | <input type="radio"/> 9-12 years |
| <input type="radio"/> 3-4 years | <input type="radio"/> 13-19 years |
| <input type="radio"/> 5-6 years | <input type="radio"/> 20 or more years |

21. What type of overseas tour are you or your spouse on?

- ☐ I am not on an overseas tour.
☐ I am on an overseas tour but have no dependents.
☐ I am on a command sponsored overseas tour, accompanied by my family.
☐ I am on a command sponsored overseas tour, not accompanied by my family.
☐ I am on a non-command sponsored overseas tour, accompanied by my family.
☐ I am on a non-command sponsored overseas tour, not accompanied by my family.

22. All in all, how satisfied are YOU with the Air Force as a way of life?

- | | |
|--------------------------------------|---|
| <input type="radio"/> Very satisfied | <input type="radio"/> Dissatisfied |
| <input type="radio"/> Satisfied | <input type="radio"/> Very dissatisfied |

MILITARY MEMBERS SKIP TO QUESTION 27. CIVILIAN SPOUSES OF MILITARY MEMBERS CONTINUE WITH QUESTION 23.

23. If you had your choice, which would you prefer to be at this time?

- ☐ Not employed ☐ Employed full-time
☐ Employed part-time

24. What type of impact has your spouse's Air Force career had on your career plans?

- | | |
|-------------------------------------|--|
| <input type="radio"/> Very positive | <input type="radio"/> Very negative |
| <input type="radio"/> Positive | <input type="radio"/> No impact at all |
| <input type="radio"/> Negative | |

25. How much better or worse do you think aspects of your career would be if your spouse was in civilian life?

	DOES NOT APPLY	DON'T KNOW	BETTER IN CIVILIAN LIFE	ABOUT THE SAME IN BOTH	WORSE IN CIVILIAN LIFE
Your opportunities for advancement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your pay	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your retirement benefits	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Type of work you do	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other benefits (such as medical/dental)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Opportunities to make use of your abilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Job security	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Working hours and schedule	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Location of job	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

26. What would YOU like YOUR SPOUSE'S Air Force career plans to be?

- ☐ To stay in the Air Force until retirement
- ☐ To stay in the Air Force beyond his/her present obligation; but not necessarily until retirement
- ☐ To leave the Air Force upon completion of his/her present obligation
- ☐ Undecided

YOUR FAMILY

IF ONE OR MORE OF THE FOLLOWING APPLIES TO YOU:

- MARRIED
- HAVE CHILDREN
- PROVIDING CARE TO OLDER FAMILY MEMBER

THEN CONTINUE WITH QUESTION 27. ALL OTHER RESPONDENTS, SKIP TO QUESTION 36.

IF YOU HAVE NO CHILDREN, MARK HERE AND SKIP TO QUESTION 30. ☐

27. Indicate the sex and age of each dependent child and whether or not the child lives with you.

— If more than 5 dependents, list the five youngest.

— Dependents away at college are to be considered as living with you.

DEP	SEX		AGE IN YEARS						LIVES WITH YOU	
	M	F	0-2	3-5	6-9	10-12	13-17	18+	YES	NO
1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

28. Are any children living with you from a previous marriage?

- ☐ Yes ☐ No

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29. Mark each item below that has been a problem for children living with you in the past 12 months. Then, mark if you sought help (OUTSIDE YOUR FAMILY) for the problem.

A. A PROBLEM FOR CHILDREN IN MY FAMILY IN THE LAST 12 MONTHS		B. I SOUGHT OUTSIDE HELP
Family separations because of training, field duty, PCS, TDY, etc.	<input type="radio"/>	<input type="radio"/>
Parent(s) separating or retiring from the military	<input type="radio"/>	<input type="radio"/>
Making new friends	<input type="radio"/>	<input type="radio"/>
Adjusting to new schools	<input type="radio"/>	<input type="radio"/>
Conflict with parents	<input type="radio"/>	<input type="radio"/>
Conflict with siblings	<input type="radio"/>	<input type="radio"/>
Conflict with friends/peers	<input type="radio"/>	<input type="radio"/>
Divorce or separation of parents	<input type="radio"/>	<input type="radio"/>
Adjusting to stepfamily	<input type="radio"/>	<input type="radio"/>
Lack of recreational activities	<input type="radio"/>	<input type="radio"/>
Close friend or family member dying	<input type="radio"/>	<input type="radio"/>
Abuse by family member or other individual	<input type="radio"/>	<input type="radio"/>
Racial/ethnic prejudice	<input type="radio"/>	<input type="radio"/>
Separation from extended family (grandparents, aunts, uncles, cousins)	<input type="radio"/>	<input type="radio"/>
Alcohol use	<input type="radio"/>	<input type="radio"/>
Drug use	<input type="radio"/>	<input type="radio"/>
Lack of sex education	<input type="radio"/>	<input type="radio"/>
Lack of youth employment opportunities	<input type="radio"/>	<input type="radio"/>
On the job problems for youth	<input type="radio"/>	<input type="radio"/>
Problems with dating	<input type="radio"/>	<input type="radio"/>
Problems with police	<input type="radio"/>	<input type="radio"/>
Depression	<input type="radio"/>	<input type="radio"/>
Talk of suicide	<input type="radio"/>	<input type="radio"/>
Problems with schoolwork	<input type="radio"/>	<input type="radio"/>

30. Are you providing help or care to an older family member? (Include any kind of help you may provide.)

- ☐ Yes, claim as dependent
- ☐ Yes, but don't claim as dependent
- ☐ No ☐ SKIP TO QUESTION 32.

31. How far away from you does the older family member live?

- ☐ Lives with you
- ☐ Within an hour
- ☐ One to two hours
- ☐ More than two hours, but within a day's drive
- ☐ More than a day's drive

32. Mark the family members you take care of that have any of the special needs listed below.
(MARK ALL THAT APPLY.)

	CHILDREN	SPOUSE	OTHER FAMILY MEMBER
A physical disability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A mental, emotional or developmental disability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A problem speaking English	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

33. To what extent do family needs interfere with your job or normal schedule?

- | | |
|---|-------------------------------------|
| <input type="radio"/> Very great extent | <input type="radio"/> Slight extent |
| <input type="radio"/> Great extent | <input type="radio"/> Not at all |
| <input type="radio"/> Moderate extent | |

34. To what extent do your job responsibilities interfere with your family life?

- | | |
|---|-------------------------------------|
| <input type="radio"/> Very great extent | <input type="radio"/> Slight extent |
| <input type="radio"/> Great extent | <input type="radio"/> Not at all |
| <input type="radio"/> Moderate extent | <input type="radio"/> Not employed |

35. In the last month, how many hours did you spend handling the following situations:

	NONE IN THE LAST MONTH	1-4 HOURS	5-8 HOURS	MORE THAN 8 HOURS	DOES NOT APPLY
Problems with child care arrangements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Family member's health problem	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Transportation problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
School problem with children	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Running errands or caring for older family member	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

YOUR LIFE

36. Who are you likely to turn to for help with a personal or family problem?
(MARK ALL THAT APPLY.)

- ☐ No one
- ☐ Friend
- ☐ Spouse
- ☐ Other family member/extended family
- ☐ Unit Commander
- ☐ Unit Commander's spouse
- ☐ Chaplain
- ☐ Neighbor
- ☐ Air Force Family Support Center (FSC) staff
- ☐ Service provider on base
- ☐ Service provider off base

37. For each of the following, indicate your level of satisfaction or dissatisfaction.

	VERY SATISFIED	SATISFIED	DISSATISFIED	VERY DISSATISFIED	N/A OR DON'T KNOW
HOW SATISFIED ARE YOU WITH THE:					
Supportiveness of the community you live in.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Air Force as a good place for bringing up children.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Support of families by base leadership here.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Support of families by your unit (or spouse's unit).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Publicity about community support programs here.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Handling of reimbursements for PCS expenses.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Off-base public schools here.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
On-base schools here.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Relationship you have with your spouse.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Relationship you have with your children.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

FAMILY PROGRAMS AND SERVICES

38. For each program or service listed:

- FIRST, mark column 1 if you needed the service in the last 12 months, even if you did not use it.
- SECOND, mark column 2 if you were satisfied or dissatisfied with services you used."

2. IF YOU USED A PROGRAM, WERE YOU:

DISSATISFIED

SATISFIED

1. NEEDED THIS PROGRAM OR SERVICE DURING THE LAST 12 MONTHS

FINANCIAL INFORMATION AND ASSISTANCE

Money management education
Budget counseling
Financial planning for PCS/deployment
Balancing your checkbook info.
Credit union, savings account, insurance information
Emergency loan services
Tax assistance services
Help paying off debts
Estate/retirement planning
Establishing credit

TRANSITION INFORMATION AND ASSISTANCE

Help with transition ID card
VA benefits counseling
Excess leave and permissive TDY (PTDY) information
Health care extension information
GI bill extension information
Resume writing and preparation
Assistance with Defense Outplacement Resource System (DORS)
Assistance with NAF employment
Employer job bank information
Relocation assistance
Shipment/storage of household goods
Transition Bulletin Board (TBB)
Transition Assistance Program Seminar (TAP)
Reserve Affiliation

SINGLE PARENT NEEDS

Single parent support groups
Special child care arrangements for single parents

2. IF YOU USED A PROGRAM, WERE YOU:

DISSATISFIED

SATISFIED

1. NEEDED THIS PROGRAM OR SERVICE DURING THE LAST 12 MONTHS

RELOCATION NEEDS

Community orientation referrals
Newcomer visits/briefings
Overseas orientation information
Sponsorship services
Welcome packet
Lending closet

TRANSPORTATION NEEDS

Emergency transportation
Transportation while on base
Transportation to and from base
Transportation between bases located in same metropolitan area

COMMUNITY SERVICE NEEDS

Directory of community services and programs
Services for families living off base
Neighborhood crime watch
Safe Watch for kids
Citizenship classes
Services for families separated from military member
Telephone information and referral services
Libraries
Housing location referral
Legal services
Chapel services
Base Chaplain's program
Social/recreation programs for single members

EDUCATION NEEDS

Education information and referrals for children
Adult continuing education
College education information
Technical/vocational education information
English as a second language

2. IF YOU USED A PROGRAM, WERE YOU:

DISSATISFIED
SATISFIED

1. NEEDED THIS PROGRAM OR SERVICE DURING THE LAST 12 MONTHS

EMERGENCY NEEDS

Crisis hot line
Emergency food
Emergency home furnishings
Emergency long distance phone calls
Emergency health care
Shelter/safe houses for abused persons

PHYSICAL HEALTH NEEDS

Adult fitness activities
Adult sports activities
Nutrition information
Prenatal care
Newborn infant care
Preventive health care
Special health needs (AIDS info, Radon info, etc.)
CHAMPUS information
Dental care services
Hospital/clinic services

MENTAL HEALTH NEEDS

Support for family members of alcoholics
Drug and alcohol treatment
Individual therapy
Suicide prevention information
Marriage and family therapy

IF ONE OR MORE OF THE FOLLOWING APPLIES TO YOU:
- MARRIED
- HAVE CHILDREN
- PROVIDING CARE FOR OLDER FAMILY MEMBER
THEN CONTINUE. ALL OTHER RESPONDENTS, SKIP TO QUESTION 39.

2. IF YOU USED A PROGRAM, WERE YOU:

DISSATISFIED
SATISFIED

1. NEEDED THIS PROGRAM OR SERVICE DURING THE LAST 12 MONTHS

OLDER FAMILY MEMBER NEEDS

Transportation
Financial assistance
Home health care
Adult social activities
Adult day program
Nursing care
Meals; home delivery
Chore services; maid service

CHILD NEEDS

Child day care — drop-in
Child day care — full-day
Adoption information and assistance
Child abuse services
Foster child care
Before school youth supervision
After school youth supervision
Assistance with child care during TDYs/deployments/mobilizations

FAMILY NEEDS

Family life education
Parenting training
Stepfamily information
Child abuse prevention education program
Marriage enrichment
Respite care
Family recreation activities
Family safety information

SPOUSE NEEDS

Foreign-born spouse cultural orientation
Foreign-born spouse support groups
Spouse abuse services
Alimony or child support assistance
Programs about military life
Programs for spouses about military mission
Programs for spouses during TDYs/deployments/mobilizations

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2. IF YOU USED A PROGRAM, WERE YOU:

DISSATISFIED
SATISFIED

1. NEEDED THIS PROGRAM OR SERVICE DURING THE LAST 12 MONTHS

FAMILY MEMBER EMPLOYMENT NEEDS

Employment referrals
Career planning
Employment skills training
Youth summer employment
Youth part-time employment during school year

SPECIAL NEEDS OF FAMILY MEMBERS WITH DISABILITIES

Vocational training for adults
Special education for children
Special needs adult day care
Special needs child day care
Wheelchair/adaptive equipment
Special medical care
Special phone service for hearing impaired
Accessible transportation

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

39. How do YOU hear about programs or services you or members of your family might need? (MARK ALL THAT APPLY.)

- ☐ I never hear anything at all
- ☐ From friends or neighbors
- ☐ From bulletin boards on base
- ☐ From the installation newsletter or newspaper
- ☐ From the local community newspaper
- ☐ From radio
- ☐ From television
- ☐ From other unit members or co-workers
- ☐ From unit or base command or supervisors
- ☐ From spouse
- ☐ From flyers
- ☐ From children

40. MARK WHETHER YOU AGREE OR DISAGREE WITH THE STATEMENT: Programs or services which support families are important to my commitment to the Air Force.

- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly disagree

A9

AIR FORCE FAMILY SUPPORT CENTER (FSC)

- 41. For each FSC program listed below:** 169
- First, mark in column 1 the programs you are aware are offered by the FSC at your current base.
 - Second, mark column 2 if you were satisfied or dissatisfied with the programs at the FSC you used.

2. IF YOU USED THE PROGRAM, WERE YOU:

DISSATISFIED
SATISFIED

1. PROGRAMS YOU ARE AWARE OF AT THIS BASE

Information and referral
Family support for mobilizations or deployments
Relocation assistance program (RAP)
Air Force Aid Society
Crisis assistance
Financial counseling
Consumer affairs program
Employment resource program
Volunteer program
Transition assistance
Support groups
Retiree activities
Classes on child development and family

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

42. Below is a list of problems some people might have with the FSC. If you used the FSC at this base mark your answers in column A. If you have not used the FSC at this base mark your answers in column B.

(MARK ANSWERS IN ONLY ONE COLUMN.)

	A HAVE USED FSC AT THIS BASE	B HAVE NOT USED FSC AT THIS BASE
Programs don't meet my needs	<input type="radio"/>	<input type="radio"/>
Not interested in programs or services	<input type="radio"/>	<input type="radio"/>
Did not think information remained confidential	<input type="radio"/>	<input type="radio"/>
Not aware of programs or services	<input type="radio"/>	<input type="radio"/>
Inconvenient location	<input type="radio"/>	<input type="radio"/>
Inconvenient hours of operation	<input type="radio"/>	<input type="radio"/>
Waiting time too long	<input type="radio"/>	<input type="radio"/>
Old/outdated building	<input type="radio"/>	<input type="radio"/>
Inadequate parking	<input type="radio"/>	<input type="radio"/>
Quality of equipment/furnishings is poor	<input type="radio"/>	<input type="radio"/>
Expertise/attitude of program staff is poor	<input type="radio"/>	<input type="radio"/>
Lack of transportation	<input type="radio"/>	<input type="radio"/>
Not accessible for the disabled	<input type="radio"/>	<input type="radio"/>
Leadership does not support FSC programs	<input type="radio"/>	<input type="radio"/>
Lack of child care	<input type="radio"/>	<input type="radio"/>
Prefer to use off-base services	<input type="radio"/>	<input type="radio"/>
No problems with FSC	<input type="radio"/>	<input type="radio"/>

43. How satisfied are you with the overall quality of Air Force Family Support Center (FSC) programs and services at your base?

- | | |
|--------------------------------------|--|
| <input type="radio"/> Very satisfied | <input type="radio"/> Very dissatisfied |
| <input type="radio"/> Satisfied | <input type="radio"/> Never used/no experience |
| <input type="radio"/> Dissatisfied | |

RELOCATION

IF YOU HAVE NEVER MOVED AS A RESULT OF YOU OR YOUR SPOUSE RECEIVING PERMANENT CHANGE OF STATION (PCS) ORDERS, MARK HERE AND SKIP TO QUESTION 56. \longrightarrow ☐

44. Where were you living before you moved to your current location?

- ☐ CONUS
☐ USAFE (Europe, England, Middle East)
☐ PACAF (Korea, Japan, Guam, Hawaii, Alaska)
☐ Other

45. After arriving at your current location, how many months did you have to wait (or have you been waiting) to get into permanent housing (on or off base)?

- ☐ Less than 1 month
☐ 1-2 months
☐ 3-4 months
☐ 5-6 months
☐ 7 or more months
☐ No wait; moved directly into permanent housing

46. In how many different temporary places did you live (have you lived) after arriving at your current location? (Include where you currently live plus stays in transient quarters, motels, with friends or family, or other locations.)

<input type="radio"/> 0	<input type="radio"/> 0
<input type="radio"/> 1	<input type="radio"/> 1
<input type="radio"/> 2	<input type="radio"/> 2
<input type="radio"/> 3	<input type="radio"/> 3
<input type="radio"/> 4	<input type="radio"/> 4
<input type="radio"/> 5	<input type="radio"/> 5
<input type="radio"/> 6	<input type="radio"/> 6
<input type="radio"/> 7	<input type="radio"/> 7
<input type="radio"/> 8	<input type="radio"/> 8
<input type="radio"/> 9	<input type="radio"/> 9

47. During the first month at your current location, how much approved time did the military member take off from work to take care of needs related to the PCS move? Count approved leave or permissive TDY. (Include taking care of housing, schools, child care, repairs, forms, etc.)

- | | |
|--------------------------------|---|
| <input type="radio"/> None | <input type="radio"/> 7-14 days |
| <input type="radio"/> One day | <input type="radio"/> 15-21 days |
| <input type="radio"/> 2-3 days | <input type="radio"/> More than 21 days |
| <input type="radio"/> 4-6 days | |

- After you arrived at this base. (Mark in part A)
- Before you departed your last base. (Mark in part B)

If you didn't need information, mark column 1. If you needed information, but didn't get it, mark column 2. If you got the information needed, mark how helpful it was in column 3, 4, or 5.

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A. INFORMATION/SERVICES AT CURRENT BASE:

	NOT NEEDED	NEEDED BUT DIDN'T GET	VERY HELPFUL	SOMEWHAT HELPFUL	NOT HELPFUL
	↓ 1	↓ 2	↓ 3	↓ 4	↓ 5
SERVICES					
Pre-move planning/counseling	○	○	○	○	○
Shipment and storage of personal belongings	○	○	○	○	○
Legal assistance/information	○	○	○	○	○
Financial assistance/counseling	○	○	○	○	○
Job search assistance	○	○	○	○	○
Stress management counseling	○	○	○	○	○
Child care pre- and post-PCS	○	○	○	○	○
DESTINATION INFORMATION					
Geographic area and culture	○	○	○	○	○
Community services (utilities, shopping, etc.)	○	○	○	○	○
Base housing (availability and facilities)	○	○	○	○	○
Off-base housing (availability and cost)	○	○	○	○	○
Temporary lodging	○	○	○	○	○
Home buying and selling	○	○	○	○	○
Child care (availability and cost)	○	○	○	○	○
Schools for children	○	○	○	○	○
Adult education	○	○	○	○	○
Older family member care information	○	○	○	○	○
Job market/employment opportunities	○	○	○	○	○
Exceptional Family Member services	○	○	○	○	○
Medical/dental services	○	○	○	○	○
Youth activities	○	○	○	○	○
Recreational activities	○	○	○	○	○
OTHER INFORMATION					
Benefits, entitlement, and travel pay	○	○	○	○	○
Moving pets	○	○	○	○	○

[illegible]

49. Overall, how easy or difficult was it to get the information or relocation services you needed? Answer for both your last and current bases.

	AT THE <u>CURRENT</u> BASE	AT THE <u>LAST</u> BASE
Very difficult	<input type="radio"/>	<input type="radio"/>
Somewhat difficult	<input type="radio"/>	<input type="radio"/>
Somewhat easy	<input type="radio"/>	<input type="radio"/>
Very easy	<input type="radio"/>	<input type="radio"/>

**50. Where did you get your information?
(MARK ALL THAT APPLY.)**

- ☐ Air Force brochures
- ☐ PCS-related seminars/briefings
- ☐ Newcomer orientations or tours
- ☐ Welcome packets
- ☐ Video tapes
- ☐ Automated Information System for relocation
(computerized database)
- ☐ Sponsor
- ☐ Friends
- ☐ Coworkers
- ☐ FSC staff/Relocation Assistance Counselor
- ☐ Library
- ☐ Spouse
- ☐ Other

51. Which of the following statements best describes the help you received from your sponsor? (MARK ONLY ONE.)

- ☐ Do not know if a sponsor was assigned
- ☐ Did not have a sponsor
- ☐ Decided not to use the sponsor
- ☐ Sponsor was very helpful
- ☐ Sponsor was somewhat helpful
- ☐ Sponsor was not helpful

52. Below is a list of problems some people might have had with the services provided through the Relocation Assistance Program (RAP) at the FSC. Mark problems you had at this base in column A. Mark problems you had at your last base in column B.

MARK ALL THAT APPLY IN BOTH COLUMNS

	RAP AT LAST BASE	
	A	B
Not aware of program or services	<input type="radio"/>	<input type="radio"/>
No need for information/services provided by RAP	<input type="radio"/>	<input type="radio"/>
Not available at base	<input type="radio"/>	<input type="radio"/>
Not aware of how to contact RAP	<input type="radio"/>	<input type="radio"/>
Inconvenient location	<input type="radio"/>	<input type="radio"/>
Inconvenient hours of operation	<input type="radio"/>	<input type="radio"/>
Reputation of program staff is poor	<input type="radio"/>	<input type="radio"/>
Did not think services would be helpful	<input type="radio"/>	<input type="radio"/>
Prefer to use off-base services	<input type="radio"/>	<input type="radio"/>
No problems with RAP	<input type="radio"/>	<input type="radio"/>

53. Think about your PCS move to this base. Indicate how much of a problem each of the following was in your PCS move.

	172				
	SERIOUS PROBLEM	SOMEWHAT OF A PROBLEM	SLIGHT PROBLEM	NOT A PROBLEM	NOT APPLICABLE
Having adequate time to clear your previous base	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Arranging appropriate care for older family member	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Selling your house	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Having adequate time to settle in to new residence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Moving and setting up a new household	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Transportation costs incurred during move	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Temporary lodging expenses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cost of setting up new residence (curtains, carpeting, painting)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Finding second job off base for military member	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Finding employment for civilian spouse of military member	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Continuing your or your spouse's education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Transferring your children's school records	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Finding a school and enrolling children	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Finding child care	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Finding permanent housing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Finding shopping areas, recreational facilities, etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Finding services for family members with special needs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Children adjusting to new environment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Adjusting to a higher cost of living	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

54. Overall, how stressful was this PCS move?

- ☐ Very stressful
- ☐ Moderately stressful
- ☐ Slightly stressful
- ☐ Not stressful

PLEASE CONTINUE TO THE NEXT PAGE

☐ ☐ ☐ ☐

APPENDIX B:
SURVEY COVER LETTER



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE
WASHINGTON DC

175

3 MAR 1993

Air Force Members and Families

You have been selected to participate in an Air Force Community Needs Survey which is being sent to a sample of active duty personnel and spouses at every installation in the Air Force. The survey addresses issues that are important to you and to your base community. Results from this survey will be used to identify the needs of Air Force members and families in your community and to determine how those needs can be better met by the Family Support Center (FSC) and other service providers.

It is important that you complete and return the survey as soon as possible. Everyone's feedback is essential to make the survey results useful. When you have completed the survey, seal it in the envelope provided and return it to the FSC. Your responses are confidential!

Your support is greatly appreciated. If you have any questions, please do not hesitate to contact your Family Support Center for assistance.

A handwritten signature in cursive script, reading "CH. Heflebower", is positioned above the typed name.

CHARLES R. HEFLEBOWER
Brigadier General, USAF
Director, Personnel Programs

APPENDIX C:
LETTER OF PERMISSION TO USE DATA SET

HQ USAF/DPCH
1040 Air Force Pentagon
Washington, DC 20330-1040

Captain Katherine Rearden
26 Clarendon Court
Madison, WI 53704-2878

Dear Capt.  Rearden,

Enclosed is the seven disks that make up the sample of the 1993 Needs Assessment as well as the code book. Because this data was originally subject to the privacy act, please be discrete in its use with others. Hope this gets to you safely.

I have reviewed your proposal and it look ambitious. I assume your chair and your committee are flexible about the quality of the instrument that was used to gather the data. The more I get into this survey instrument the more flawed it appears. The current version still is full of stems that leave a lot to be desired, from a pure research point of view. As a result, some of the assumptions drawn from the questions may be rather tenuous.

It appears you have done a thorough review and have thought through your project. I'm sure you will continue to dig deeper and be drawn in different directions, but it will all fall into place. If I can be of further assistance please do not hesitate to call or write.

Sincerely,



DAVID S. WOLPERT, Lt Col, USAF, BSC
Chief, Family Research

APPENDIX D:
EMPIRICAL FORMULATION OF REGRESSION MODELS
EMPLOYED IN THIS STUDY

EMPIRICAL FORMULATION OF REGRESSION MODELS EMPLOYED IN THIS STUDY

- 4.1. Controlling for demographics and stress, respondents who are married will report the need for fewer formal social support services compared to unmarried respondents.

HIERARCHICAL OLS REGRESSION ANALYSIS OF WHOLE SAMPLE

$$\begin{array}{ccccccc}
 \text{Need} & = & \text{Age (x1)} & + & \text{Sex (x2)} & + & \text{Educ (x3)} & + & \text{Race (x4, x5, x6)} \\
 \text{(Continuous)} & & \text{(Continuous)} & & \text{(Dich)} & & \text{(Continuous)} & & \text{(Categorical - white race} \\
 & & & & & & & & \text{is the omitted group)} \\
 & & + & \text{Grade (x7)} & + & \text{Milyrs (x8)} & + & \text{Stress (x9)} & + & \text{Married (x10)} & + & \text{error} \\
 & & & \text{(Continuous)} & & \text{(Continuous)} & & \text{(Continuous)} & & \text{(Dich)} & & \text{term}
 \end{array}$$

$$y = a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + b_6x_6 + b_7x_7 + b_8x_8 + b_9x_9 + b_{10}x_{10} + e$$

- 4.2 Controlling for demographics and stress, those more satisfied with their marital relationship will report need for fewer formal social support services compared to those less satisfied with their marital relationships.

HIERARCHICAL OLS REGRESSION ANALYSIS OF MARRIED SUBSAMPLE

$$\begin{array}{ccccccc}
 \text{Need} & = & \text{Age (x1)} & + & \text{Sex (x2)} & + & \text{Educ (x3)} & + & \text{Race (x4, x5, x6)} \\
 \text{(Continuous)} & & \text{(Continuous)} & & \text{(Dich)} & & \text{(Continuous)} & & \text{Categorical - white race} \\
 & & & & & & & & \text{is the omitted group)} \\
 & & + & \text{Grade (x7)} & + & \text{Milyrs (x8)} & + & \text{Stress (x9)} & + & \text{Sprltn (x10)} & + & \text{error term} \\
 & & & \text{(Continuous)} & & \text{(Continuous)} & & \text{(Continuous)} & & \text{(Continuous)}
 \end{array}$$

$$y = a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + b_6x_6 + b_7x_7 + b_8x_8 + b_9x_9 + b_{10}x_{10} + e$$

- 4.3 Controlling for demographics and the level of stress of overseas tour of duty and marital status, respondents who are married and accompanied by their spouse will report need for fewer formal support services compared to those married but unaccompanied by their spouse.

HIERARCHHICAL OLS REGRESSION ANALYSIS OF MARRIED & OVERSEAS SUBSAMPLE

$$\begin{array}{ccccccc} \text{Need} & = & \text{Age (x1)} & + & \text{Sex (x2)} & + & \text{Educ (x3)} & + & \text{Race (x4, x5, x6)} \\ \text{(Continuous)} & & \text{(Continuous)} & & \text{(Dich)} & & \text{(Continuous)} & & \text{(Categorical - white race} \\ & & & & & & & & \text{is the omitted group)} \end{array}$$

$$\begin{array}{ccccccc} + & \text{Grade (x7)} & + & \text{Milyrs (x8)} & + & \text{Stress (x9)} & + & \text{Avspouse (x10)} & + & \text{error term} \\ & \text{(Continuous)} & & \text{(Continuous)} & & \text{(Continuous)} & & \text{(Continuous)} & & \end{array}$$

$$y = a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + b_6x_6 + b_7x_7 + b_8x_8 + b_9x_9 + b_{10}x_{10} + e$$

- 4.4 Controlling for demographics, volunteerism, and level of stress of an overseas assignment, those married and unaccompanied on overseas military tours will report need for more formal social support services compared to those married and accompanied by their spouse.

HIERARCHHICAL OLS REGRESSION SUBSAMPLE ANALYSIS OF MARRIED OVERSEAS MEMBERS

$$\begin{array}{ccccccc} \text{Need} & = & \text{Age (x1)} & + & \text{Sex (x2)} & + & \text{Educ (x3)} & + & \text{Race (x4, x5, x6)} \\ \text{(Continuous)} & & \text{(Continuous)} & & \text{(Dich)} & & \text{(Continuous)} & & \text{(Categorical - white race} \\ & & & & & & & & \text{is the omitted group)} \end{array}$$

$$\begin{array}{ccccccc} + & \text{Grade (x7)} & + & \text{Milyrs (x8)} & + & \text{Volnter (x9)} & + & \text{Stress (x10)} & + & \text{Avspouse (x11)} & + & \text{error} \\ & \text{(Continuous)} & & \text{(Continuous)} & & \text{(Dich)} & & \text{(Continuous)} & & \text{(Continuous)} & & \text{term} \end{array}$$

$$y = a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + b_6x_6 + b_7x_7 + b_8x_8 + b_9x_9 + b_{10}x_{10} + b_{11}x_{11} + e$$

4.5 Controlling for demographics and stress respondents who volunteer will report need for fewer formal social support services compared to those who do not volunteer.

HIERARCHHICAL OLS REGRESSION ANALYSIS OF WHOLE SAMPLE

$$\begin{array}{lcl}
 \text{Need} & = & \text{Age (x1)} + \text{Sex (x2)} + \text{Educ (x3)} + \text{Race (x4, x5, x6)} \\
 \text{(Continuous)} & & \text{(Continuous)} \quad \text{(Dich)} \quad \text{(Continuous)} \quad \text{(Categorical - white is the omitted group)} \\
 & & + \text{Grade (x7)} + \text{Milyrs (x8)} + \text{Stress (x9)} + \text{Volnter (x10)} + \text{error term} \\
 & & \text{(Continuous)} \quad \text{(Continuous)} \quad \text{(Continuous)} \quad \text{(Dich)}
 \end{array}$$

$$y = a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + b_6x_6 + b_7x_7 + b_8x_8 + b_9x_9 + b_{10}x_{10} + e$$

4.6 Controlling for demographics and stress, those satisfied with the supportiveness of the community they live in will report need for fewer formal social support services compared to those less satisfied with community supportiveness.

HIERARCHHICAL OLS REGRESSION ANALYSIS OF WHOLE SAMPLE

$$\begin{array}{lcl}
 \text{Need} & = & \text{Age (x1)} + \text{Sex (x2)} + \text{Educ (x3)} + \text{Race (x4, x5, x6)} \\
 \text{(Continuous)} & & \text{(Continuous)} \quad \text{(Dich)} \quad \text{(Continuous)} \quad \text{(Categorical - white race is the omitted group)} \\
 & & + \text{Grade (x7)} + \text{Milyrs (x8)} + \text{Stress (9)} + \text{Commssup (x10)} + \text{error term} \\
 & & \text{(Continuous)} \quad \text{(Continuous)} \quad \text{(Continuous)} \quad \text{(Continuous)}
 \end{array}$$

$$y = a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + b_6x_6 + b_7x_7 + b_8x_8 + b_9x_9 + b_{10}x_{10} + e$$

- 5.1 Controlling for demographics and stress, married will utilize more formal social support services compared to unmarried respondents.

HIERARCHICAL OLS REGRESSION ANALYSIS OF WHOLE SAMPLE

$$\begin{array}{rcll}
 \text{Use} & = & \text{Age (x1)} & + \\
 \text{(Continuous)} & & \text{(Continuous)} & \\
 & & \text{Sex (x2)} & + \\
 & & \text{(Dich)} & \\
 & & \text{Educ (x3)} & + \\
 & & \text{(Continuous)} & \\
 & & \text{Race (x4, x5, x6)} & \\
 & & \text{(Categorical - white race} & \\
 & & \text{is the omitted group)} & \\
 & & + \text{Grade (x7)} & + \\
 & & \text{(Continuous)} & \\
 & & + \text{Milyrs (x8)} & + \\
 & & \text{(Continuous)} & \\
 & & + \text{Stress(x9)} & + \\
 & & \text{(Continuous)} & \\
 & & + \text{Married (x10)} & + \\
 & & \text{(Dich)} & \\
 & & & \text{error} \\
 & & & \text{term}
 \end{array}$$

$$y = a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + b_6x_6 + b_7x_7 + b_8x_8 + b_9x_9 + b_{10}x_{10} + e$$

- 5.2 Controlling for demographics and stress, married respondents on overseas tours and accompanied by spouse will utilize more formal social support services more compared to overseas members unaccompanied by their spouses.

HIERARCHICAL OLS REGRESSION SUBSAMPLE ANALYSIS OF MARRIED & OVERSEAS

$$\begin{array}{rcll}
 \text{Use} & = & \text{Age (x1)} & + \\
 \text{(Continuous)} & & \text{(Continuous)} & \\
 & & \text{Sex (x2)} & + \\
 & & \text{(Dich)} & \\
 & & \text{Educ (x3)} & + \\
 & & \text{(Continuous)} & \\
 & & \text{Race (x4, x5, x6)} & \\
 & & \text{(Categorical - white race} & \\
 & & \text{is the omitted group)} &
 \end{array}$$

$$\begin{array}{rcll}
 + \text{Grade (x7)} & + & \text{Milyrs (x8)} & + \\
 \text{(Continuous)} & & \text{(Continuous)} & \\
 & & + \text{Avspouse (x9)} & + \\
 & & \text{(Dich)} & \\
 & & & \text{error term}
 \end{array}$$

$$y = a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + b_6x_6 + b_7x_7 + b_8x_8 + b_9x_9 + b_{10}x_{10} + e$$

- 5.3 Controlling for demographics stress, respondents who volunteer will utilize more formal social support services compared to those who do not volunteer.

HIERARCHICAL OLS REGRESSION ANALYSIS OF WHOLE SAMPLE

Use = Age (x1) + Sex (x2) + Educ (x3) + Race (x4, x5, x6)
 (Continuous) (Continuous) (Dich) (Continuous) (Categorical - white race
 is the omitted group)

+ Grade (x7) + Milyrs (x8) + Stress(x9) + Volnter (x10) + error
 (Continuous) (Continuous) (Continuous) (Dich) term

$$y = a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + b_6x_6 + b_7x_7 + b_8x_8 + b_9x_9 + b_{10}x_{10} + e$$